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ABSTRACT

The MISOE Census Data System (CDS) is one of two major subsystems of an integrated management information system (MISOE), which was developed to provide occupational education managers with comprehensive data on which to base rational management decisions. Essentially, CDS contains descriptive information systematically structured in a manner which allows it to be used as a basis for sampling evaluative research studies. CDS collects and stores census data for all school systems offering occupational education programs, including all data formerly collected by the Annual Federal Report for Occupational Education, except followup data, which is included in the Sample Data System (CDS). The publication contains an introduction to the census data system, describes concepts that are essential to its understanding, and provides step-by-step instructors for the reporting of information in the CDS reporting booklets. The concepts described are indigenous to CDS and provide solutions to problems historically encountered in the design of management information systems for education. They include a systematic means of accurately describing occupational education programs, a unique system of terminal performance objectives (TERMOBS), and a program cost-estimating process that circumvents major objections heretofore raised to program budgeting systems. (Author/AJ)

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CENSUS DATA SYSTEM

of the

MANAGEMENT INFORMATION SYSTEM FOR OCCUPATIONAL EDUCATION

GUIDELINES AND INSTRUCTIONS

FOR REPORTING

September, 1975

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PREFACE

This publication contains an introduction to the Census Data System (CDS) of the Management Information System for Occupational Education (MISOE) and describes concepts that are essential to its understanding. These concepts are indigenous to the Census Data System (CDS) and are considered to be major developments in that they provide important solutions to problems historically encountered in the design of management information systems for education. They include a systematic means of accurately describing occupational programs as they diversely exist in the field, a unique system of terminal performance objectives that fulfill the promise of objectives as management supportive tools, and a program cost-estimating process that circumvents major objections heretofore raised to program budgeting systems.

The last section in this booklet contains step-by-step instructions for the reporting of information in all of the reporting booklets of the Census Data System. The actual data collection instruments, or reporting booklets, are separated from this document for purposes of convenience during the implementation process. All of the booklets that constitute the Census Data System are color-coded as follows for easy identification:

Red	:	Census Data System of the Management Information System for Occupational Education - Guidelines and Instructions for Reporting
Yellow	:	Fall School Head Report - Reporting Booklet 1.0
Orange	:	Fall Department Head Report - Reporting Booklet 2.0
		End-of-Year School Report - Reporting Booklet 3.0
Dark Green	:	Part A - Student Data
Light Green	:	Part B - Expenditure Data
		End-of-Year Department Report - Reporting Booklet 4.0
Dark Blue	:	Part A - Student Data
Light Blue	:	Part B - Expenditure Data

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INTRODUCTION

The MISOE Census Data System is part of an integrated management information system which has been developed to provide managers of Occupational Education with comprehensive data on which rational management decisions can be based. This system is called the Management Information System for Occupational Education (MISOE)[1] and its base of operations is the Division of Occupational Education. It is a complex system offering enormous information capabilities and which features instant data retrieval with which managers can interact.

The Management Information System for Occupational Education (MISOE) is comprised of two major subsystems: the Census Data System (CDS) and the Sample Data System (SDS).

The Census Data System (CDS) collects and stores census data for all school systems offering Occupational Education programs. It includes all of the data formerly collected by the Department of Education's "Annual Federal Report for Occupational Education" with the exception of the follow-up data (OE 3139) which is included in the Sample Data System. Essentially, CDS contains descriptive information systematically structured in a manner which allows it to be used as a basis for sampling evaluative research studies. The MISOE Sample Data System (SDS) collects and stores data on a sample of students to determine cause and effect relationships within educational programs. It includes an input

(1) "Computer Assisted Planning for Education - a Prototype", Vol. 7, No. 2; Winter, 1974; Journal of Research and Development in Education, Athens, Georgia.

battery which describes the characteristics of the students as they enter the programs, a process battery which describes the nature of the teaching process to which the student is exposed, and follow-up information which examines the lifestyles and impact of the program completor on his community. Essentially, the Sample Data System pr[illegible]he means to evaluate the long-range effects of Occupatio[illegible]ion.

The data collected in both CDS and SDS are interrelated and interconnected utilizing existing code classification schemes (e.g. USOE codes). Thus, each system while serving different functions are integrally designed in a way that allows total flexibility in being able to accommodate unforeseen future informational needs.

These guidelines and instructions are concerned with the data collection instruments of the Census Data System. These instruments, or reports, have been successfully field tested and their feasibility to collect the data demonstrated. These reports furnish the means of connecting occupational education program information to program cost information in a manner that provides the basis for the determination of program-effectiveness, program cost-effectiveness and for cost-benefit analyses when combined with benefit data derived from other sources. In addition, portions of the system are of immediate benefit to school administrators in the management of their programs. The reporting instruments of MISOE CDS are divided into two parts, the Fall Reports and the End-of-Year Reports.

To summarize their content, the Fall Reports collect data from the schools at the beginning of the school year (October) and relate program descriptions, enrollments and job-entry skills acquired by program completors. They also collect basic information that describes administrative and instructional staffs, the utilization of student class time and the capacity and utilization of instructional areas.

An important aspect of the Fall Reports is the introduction of terminal objectives (TERMOBs) to occupational education in Massachusetts. These objectives provide the occupational educators a new means to communicate the job-entry capabilities offered to students of the most popular programs offered in the State. The concept of employing TERMOBs as an integral part of an educational data reporting system represents a major development, since it enables comparisons to be made between schools and school systems in terms of skills offered to specific student groups. In addition, TERMOBs provide the means for educators to specifically target to job skills that are required by the manpower market. Such information would be helpful in analyzing educational goals of programs as well as explaining cost differences among them. Hence, the performances of the policy decision-makers in occupational education should be improved when this data is made available. It is certain that occupationally-oriented programs will benefit in the long run when more accurate and descriptive information is transmitted to educational decision-makers. Furthermore, the data is in a format which has been

especially designed as part of a computer-supported information system.

The End-of-Year Reports collect expenditure data by occupational programs within a school, annual data on completors, dropouts, and transfer students. The financial portion of these reports is structured to be used in conjunction with the existing Superintendents' End-of-Year Pupil and Financial Report and the CDS Fall Reports in the determination of program costs. The financial reports essentially provide a program cost-accounting system for Occupational Education Programs.

GUIDELINES

The Guidelines sections which follow are devoted to discussion of the rationale behind the information sought and descriptions of coding methods, definitions and general directions necessary in order to report data properly and accurately.

Program Structure

Occupationally-oriented programs are structured in two distinct ways. In general, program structure in vocational-technical schools differs from that of many regular high schools, comprehensive schools, and community colleges.

Most vocational-technical schools and community colleges in Massachusetts use a structured or "tracked" system of describing their student groups. A mandatory sequence of courses is prescribed for each occupational area in which students are trained. This sequence of courses ensures that each student is enrolled in a complete instructional program, one that will provide him with all the required job-entry skills. For example, students enrolled in the Woodworking Department acquire the job-entry skills for carpentry and cabinet-making. In order for a student to successfully complete this program in either carpentry or woodworking, he is required to follow a prescribed course sequence established by the school.

Regular high schools and comprehensive schools often differ in their program structure. These programs are offered to students on an "untracked" basis. In an "untracked" program, students are not required to follow a prescribed course sequence. In many schools a course sequence is recommended for preparation

Program Structure (Cont'd)

in specific occupational areas, but a student is not bound to follow it. For example, assume a student enrolled in the Business Education Department wants to acquire job-entry skills for an occupation as a secretary. The school's Business Education Department recommends a specific course sequence to be followed over a three-year period. However, the student may elect to follow the suggested sequence, or may elect to follow his own. In the latter case, the sequence of courses chosen can usually be used to define the student group into which he falls.

USOE Codes

The USOE coding system is used to describe occupational programs of instruction by relating student enrollment to the occupations for which they are being trained, and with the job-entry skills which they are acquiring. However, in many instances there are distinct student groups acquiring different skills within an instructional area. The Fall Report accommodates each educational situation by providing the means for each school to categorize students accurately using USOE Codes.

USOE Codes are numerical descriptions of instructional occupational areas for which students are learning job-entry level skills. Seven major occupational areas of instruction are identified by the two digits to the left of the decimal point of a six (or eight) digit code number, as follows:

USOE Codes (Cont'd)

01 Agricultural Occupations	09 Home Economics Occupations
04 Distribution and Marketing Occupations	14 Office and Business Occupations
07 Health Occupations	16 Technical Occupations
17 Trade and Industrial Occupations	

Numbers to the right of the decimal point describe increasing occupational specificity by which to classify students enrolled in instructional areas, for example:

First 2-digit position:

14 OFFICE OCCUPATIONS

Second 2-digit position:

14.02 BUSINESS DATA PROCESSING SYSTEMS OCCUPATION

Third 2-digit position:

14.0202 PERIPHERAL EQUIPMENT OPERATORS

Fourth 2-digit position:

14.020201 KEYPUNCH & CODING EQUIPMENT OPERATORS

Six-digit numbers are usually sufficient to classify most instructional programs in the State. A listing of applicable USOE Codes is given in Appendix H.

While USOE Code numbers identify instructional areas, they do not necessarily represent administrative units such as departments. For instance, a particular school may offer a woodworking curriculum, administered by a woodworking department, which educates students to be carpenters and cabinet-makers. In such a situation, two USOE Codes are required to identify the instructional areas or student groups: 17.1001 for carpentry

and 17.3601 for cabinet-making. [1] The remainder of this section describes how students in instructional occupational programs (as they are offered in Massachusetts) can be accurately classified by USOE Codes.

Students enrolled in Occupational Education programs are coded by three distinct methods in order to accurately describe instructional areas as they are offered. These methods are (1) The Single Student Group Method, (2) the Multiple Student Group Method and (3) the Clustered Student Group Method.

Single Student Group Programs - A single student group program is defined by a situation where all students are offered the same course sequence throughout the entire program. They are all prepared for the same occupational area(s) and they all receive training in identical job-entry skills (TERMOBs). A single student group may receive training which could be described by one or several USOE Codes.

For example, consider an Automotive Mechanics Program which includes learning experiences as described by the following USOE Code:

(1) These code designations are not of sufficient specificity to include all of the actual occupations for which students would qualify. For example, an instructional area classified as 17.3601 "Millwork and Cabinetmaking" may qualify a program completor for employment as a furniture assembler, tenoner operator, patternmaker and many others depending on the specific job-entry skills learned during the educational experience. A method to describe fully the job-entry skills students learn in an instructional area has been developed as part of this Fall Report.

"17.0302 AUTOMOTIVE MECHANICS

Learning experiences concerned with the components of the vehicle, including engine, power transmission, steering, brakes and electrical systems. Included is training in the use of diagnostic and testing equipment and tools used in the repair process."

If all of the students in this program are offered the same learning skills, it is considered to be a single student group program described by one USOE code. Its enrollment would be represented by grade as follows:

Grade	10	11	12
USOE Code	17.0302	17.0302	17.0302
Enrollment	60	58	55

In certain instances, two USOE Codes may be required to more accurately describe the instructional area. For example, if within this automotive mechanics program job-entry skills in engine tune-ups were emphasized so that program completors would qualify as tune-up specialists in addition to general auto mechanics, the following description by USOE Code provides a better description of the program.

USOE Codes (Cont'd)

"17.0303 AUTOMOTIVE SPECIALIZATION

Learning experiences which emphasize more detailed training in the adjustment and repair of individual components and systems of the automobile, such as radiator, transmission, carburetor and brake system to achieve greater proficiency in the servicing of selected components."

The enrollments by grade would then be represented as follows:

Grade	10	11	12
USOE Code	17.0302 17.0303	17.0302 17.0303	17.0302 17.0303
Enrollment	60	58	55

Note that all students still receive identical training throughout the program.

Multiple Student Group Programs - A multiple student group program is defined by a situation where students are offered training in several occupational areas, but where not all students receive identical training throughout the program. Different course sequences are followed by groups of students within the program. They are, therefore, acquiring job-entry skills (TERMOBs) which will prepare them for several distinct occupations. Student groups of this kind are identified at the beginning of the program and remain static to its completion. For example, consider a Graphic Arts Program which includes learning experiences as described by the following USOE Codes:

Composition, Make-up and Typesetting (17.1901), Printing Press Occupations (17.1902) and Lithography, Photography and Platemaking (17.1903).

"17.1901 COMPOSITION, MAKE-UP AND TYPESETTING

Organized learning experiences concerned with layout, composition, make-up, and hand and machine typesetting and typecasting."

"17.1902 PRINTING PRESS OCCUPATIONS

Organized learning experiences concerned with making ready, operating and maintaining printing presses."

"17.1903 LITHOGRAPHY,PHOTOGRAPHY & PLATEMAKING

Organized learning experiences concerned with lithography, lithographic photography, stripping, and related platemaking processes."

The program is structured so that students may opt for training in one or more occupational areas within the program. It is therefore considered to be a multiple student group program and the enrollment would be represented as follows for each grade level:

Grade	10			
USOE Code	17.1901	17.1902	17.1903	17.1901 17.1902
Enrollment	25	25	25	25

USOE Codes (Cont'd)

Grade	11			
USOE Code	17.1901	17.1902	17.1903	17.1901 17.1902
Enrollment	25	24	23	24

Grade	12			
USOE Code	17.1901	17.1902	17.1903	17.1901 17.1902
Enrollment	20	24	22	23

This example indicates that of the 100 students enrolled in the program in the tenth grade, twenty-five are receiving instruction in Composition, Make-up and Typesetting (17.1901), twenty-five in Printing Press Occupations (17.1902), twenty-five in Lithography, Photography and Platemaking (17.1903), and twenty-five are receiving instruction in the two occupational areas, Composition, Make-up and Typesetting (17.1901), and Printing Press Occupations (17.1902). The same structure applies for the eleventh and twelfth grades with the decrease in enrollment due to attrition. Note that the student group did not change throughout the program.

If this program were structured so that all students were receiving instruction in all three areas throughout the program,

it would be a single student group program with a multiple code.

The enrollment would be described as fcllows:

Grade	10	11	12
USOE Code	17.1901 17.1902 17.1903	17.1901 17.1902 17.1903	17.1901 17.1902 17.1903
Enrollment	100	96	89

As a further example of a multiple student group program, consider a Graphics Arts Department that includes significant instruction in the commercial art field and when, upon completion, a student is capable of performing skills as a commercial artist. Let it be assumed that this hypothetical department divides its students in the tenth, eleventh and twelfth grades into two groups, the Graphics Arts Student Group and the Commercial Art Student Group.

It is determined by the Department Head that the USOE Code numbers that best describe the Graphic Arts Group are 17.1901, 17.1902, and 17.1903 and that the Commercial Art Group are best described by the following USOE Codes: 17.0700 (Commercial Art Occupations), 17.0701 (Interior Decorator).

USOE Codes(Cont'd)

"17.07 COMMERCIAL ART OCCUPATIONS

Organized specialized learning experiences which include theory, laboratory, and shop-work as they relate to the design and execution of layouts and making illustrations for advertising, display and instructional manuals. Instruction includes advertising, theory and preparation of copy, lettering poster design, fashion illustration, silk screen, air brush and touch-up, inks and color dynamics, package and product design, drawings for line and halftone reproduction, and other display devices and exhibits."

"17.0701 INTERIOR DECORATING

Organized learning experiences concerned with the application of art principles to the design, selection, and arrangement of materials and objects in interiors or residential and commercial structures, and in ships and aircraft to achieve aesthetic effects or as a media for conveying ideas".

This also is a multiple student group program and the enrollment would be represented as follows for each grade level:

Grade	10		11		12	
USOE Code	17.1901 17.1902 17.1903	17.0700 17.0701	17.1901 17.1902 17.1903	17.0700 17.0701	17.1901 17.1902 17.1903	17.0700 17.0701
Enrollment	25	25	23	23	20	20

Clustered Student Group Programs - A clustered student group program is defined by a situation where the program is structured so that the students are broadly grouped in the lower grades, receiving training in job-entry skills (TERMOBs) for a wide variety of occupations, and in the higher grades they are regrouped according to the specific occupational areas in which they have selected to receive training. In a clustered situation the number of student groups increases from the lower to the higher grades. The key to recognizing the difference between a multiple and a clustered program is that in the multiple situation the groups remain static throughout the program, while in the clustered situation the groups are fluid. A student has the option to choose a more highly specified group as he progresses through the program.

For example, consider a Business/Office Education Department which offers learning experiences described by the following USOE Codes: 14.0100 (Accounting & Computing), 14.0300 (General Office/Clerical) and 14.0700 (Stenographic, Secretarial & Related).

"14.0100 ACCOUNTING AND COMPUTING OCCUPATIONS

Planned learning experiences which include a combination of courses and practical experiences concerned with systematizing information about transactions and activities into accounts and quantitative records, and paying and receiving money."

USOE Codes(Cont'd)

"14.0300 FILING, OFFICE MACHINES, AND GENERAL OFFICE CLERICAL OCCUPATIONS

Planned learning experiences which include a combination of courses and practical experiences concerned with the recording and retrieval of data, including classifying, sorting and filing correspondence, records, and other data."

"14.0700 STENOGRAPHIC, SECRETARIAL, AND RELATED OCCUPATIONS

Planned learning activities which include a combination of courses and practical experiences concerned with making, classifying, and filing records, including written communications."

At the beginning of the program (ninth or tenth grade), the students are grouped together taking courses that are common to all occupational areas of specialization. During the next two or three years, their training becomes more specialized as they concentrate on one or more areas of preparation. The following table presents the enrollment data for the program just described:

Grade	9	10	11		12		
USOE Code	14.0100 14.0300 14.0700	14.0100 14.0300 14.0700	14.0100	14.0300 14.0700	14.0100	14.0300	14.0700
Enrollment	100	150	50	75	25	25	25

This example indicates that in the ninth and tenth grades, all students are in the same multi-coded student group receiving

USOE Codes (Cont'd)

instruction that could lead to any of the three areas of specialization. In grade 11, however, fifty students have elected to concentrate on courses that would qualify them as accountants (or bookkeepers) 14.0100, while seventy-five students are taking courses that would provide them with skills in general office clerical work 14.0300, and in the same stenographic and secretarial area 14.0700. In the final grade, all students specialize in one area of specialization.

If a Business/Office program is structured so that all students are receiving instruction in all three areas throughout the program, it would be a single student group program with a multiple code. The enrollment would be described as follows:

Grade	9	10	11	12
USOE Code(s)	14.0100 14.0300 14.0700	14.0100 14.0300 14.0700	14.0100 14.0300 14.0700	14.0100 14.0300 14.0700
Enrollment	100	150	125	75

Terminal Objectives (TERMOBs)

Terminal Performance Objectives (or quantified goals) have been developed to describe the occupational capabilities or skills which a student is expected to perform upon completion of a program of study. They are called terminal performance objectives (or TERMOBs) because they describe measurable

performances which a student is able to do at the termination of the program.

TERMOBs are a recent development by the Management Information System for Occupational Education (MISOE) of the Division of Occupational Education, and they are a new variation of the long accepted educational theme of specifying measurable goals as a prior condition to developing an educational program. Objectives have not lived up to their promise as useful supportive tools for education, mainly because of the enormous amount of extra energy that had to be expended by faculties to use them. Since there existed a limited number of objectives which adequately described outcomes sought by most instructional programs, teachers were faced with the task of writing their own objectives.

The TERMOB obviates the need for teachers to write objectives since they have already been written for several popular occupationally-oriented program areas.(1) The flexible and open-ended structure of the TERMOB eliminates the necessity of writing objectives and requires little additional input by faculties to adjust the TERMOB to account for local variations in curriculum as they are offered in different schools in Massachusetts. In other words, the TERMOB does not represent a standard

(1) TERMOBs have been written for the following instructional areas: Distributive Education, Practical Nursing, Occupational Child Care, Business/Office Occupations, including Business Data Processing, Automotive Body and Fender, Automotive Mechanics, Drafting, Woodworking, Electrical, Electronics, Plumbing, Graphic Arts, Machine Shop, Metalworking, Cosmetology and Quantity Foods.

which all occupational programs are required to meet, but it represents a flexible statement of job-entry skills which are required by business and industry. It is in a prescribed format which allows local school systems to communicate easily local variations as offered in their own schools--and thereby does not impose standards on the teaching process.

The scope of the TERMOB includes descriptions of what a student is expected to do and not what he is expected to know. There is a fundamental difference between knowing about a job and being able to do the job. 'Knowledge of' is really an essential ingredient for doing a complex job correctly, but while it is a necessary condition, it is rarely sufficient for satisfactory performance.

The TERMOB reporting process is designed to be used in a two-sided page arrangement where the left-hand side is the TERMOB which describes the job-entry level performance expected of the student who enters the occupation. The right-hand side provides space for the school to add, modify and revise the TERMOB as desired to best describe the objective as it is offered locally.

It is noted that TERMOBs are comprehensive in scope. They focus on the large learning tasks which a student is expected to perform upon completion of a program of study. They are intended to describe minimum job-entry trade requirements as objectives and not the minute tasks with which teachers are necessarily concerned during the process of instructing students in the achievement of these broad-scoped skills. Therefore, all of the

content of the conditions, performances and extents specified are considered to be valid on-the-job expectations of an employer relative to tool and machine usage, the types of performances to be done and how well the performances are to be done. For example, the time cited in an objective as the expected time to complete the specified performance is intended to represent a reasonable average time in which an employee would be expected to complete the stated performance. Any differences between expected student performance of the TERMOB in a school and the on-the-job trade requirements can be noted by the school on the right-hand side of the form. The TERMOB as corrected would then represent the level of competence expected by the program completors of a particular schcol by that school.

TERMOB Characteristics - TERMOBs are specified in a standard format illustrated in Appendix D, Page D-12. TERMOBs include three component specifications: Conditions, Performances and Extents.

1.00 Condition Specification - (coded 1.00 up to 2.00)

The condition component is a list of items, supplies, equipment, machinery, etc., that are present, available, and required for the execution of the specified performance(s). They do not reference any particular part of che performance or the extent, but generally apply to the overall performance and extent. The coding of the conditions is such that the numbers

range from 1.01 to 2.00. This permits a wide latitude in the listing of conditions and allows the inclusion of additional conditions if a given school system so requires.

2.00 Performance Specification (coded from 2.00 up to 3.00)

The performance component of the TERMOB describes what a student is to do, or the desired occupational behavior. Performances are expressed with action verbs, for example, build, make, repair. Such performances require the student to produce an object and/or provide a service. In both instances, there is an outcome resulting from the performance.

The action verb in the performance section of the TERMOB (make, build, repair) requires a procedure or a series of performances. Consider the following performance statement: (conditions stated), the student will build a table, (extent stated). Building a table requires several distinct performances, which, taken together, constitute the procedural portion of the performance component of the TERMOB: selecting and layout of stock, planing surfaces, shaping parts, cutting holes, making joints, and assembling the table. Hence, the performance specification calls for a general statement of performance, (make, build, repair) which is a general definition of what the student is expected to do and also a listing of performance procedures

which constitute the general statement of performance. In addition, this specification contains a precise statement describing the produced object of the service resulting from the performance. The performances are coded so that 2.01 always describes the general statement of performance and the resulting object or service. Each TERMOB has a single performance specification which produces one product or one outcome.

The specified procedures (mentioned in the previous paragraph) associated with the general statement of performance are coded from 2.02 up to 3.00 and they are numbered sequentially to relate each procedural step to a corresponding extent (see section below on extents). Although the steps (procedures or operations) are also listed in the order in which they are to be performed, it is important to understand that the order may be altered. The Department program staff may also indicate that the sequence of procedures is not important or that certain operations may be omitted.

3.00 Extent Specification (coded from 3.00 up to 4.00)

The extents are criteria against which the performances are to be measured. They describe how performances are to be rated. The format of the extent specification is exactly the same as that of the performance; the general statement of the extent (the extent to which the object or service is to be measured) is coded 3.01 to

correspond to 2.01 of the performance. The procedural extents are coded from 3.02 to 4.00 and are numbered to correspond to each of the procedural performances in the previous section.

Instructional Content and TERMOBs - Two distinct classification systems are available to stipulate the relationship between TERMOBs and occupational programs: one (for school systems) called the Instructional Division and Unit Outline divides the program into Instructional units; the other, called the Terminal Objective Division and Unit Outline classifies the program into job-entry skills (TERMOBs). Both of these outlines are included in the Terminal Objective Reporting System.

The Instructional Division and Unit Outline is the result of a broad-based input by teachers throughout the State and it is considered to include most of the instructional content for all programs as they are offered in Massachusetts. This is not to say that this outline contains all of the instructional content for all programs, nor that all programs contain all of the instructional units listed. Hence, if a faculty of a program does not consider that the Instructional Division and Unit Outline as offered is a reasonable description of its program, one of two options may be exercised; (1) the local curriculum outline may be specified as the Instructional Division and Unit Outline, or (2) divisions and units may be added to the existing outline to render it complete for local purposes.

Terminal Performance Objectives (Cont'd)

TERMOBs and the Terminal Objective Division and Unit Outlines deal with large, complex, job-entry capabilities to be demonstrated by the student at the completion of the program. This system is not designed to describe in detail every individual task learned by the student during his educational program. Describing performance objectives (or behavioral objectives) for the instructional units is left to the school system. The instructional Division and Unit Outline previously discussed is intended to serve the purpose of classifying these units.

Although the Terminal Objective Division and Unit Outline classifies large and complex objectives, the smaller behavioral objectives learned by the student from instructional units within the school are covered by the individual TERMOBs themselves. The relationships between the end-program TERMOB and the instructional content of the program is made by connecting specific units of the Instructional Division and Unit Outline to the TERMOB which includes these units. The actual connection between the two may be simply made by relating the identification number of the TERMOB to the instructional units which are included within the TERMOB.

Identification Numbers and Codes

The cover pages of the reporting booklets and the reporting forms themselves contain spaces for various identification and code numbers intended to identify, classify, and categorize each program in detail. The coding system is essential to the mechanics of retrieving, sorting and reporting back information

so that it will be of maximum value at all levels of educational management. The importance of reporting accurate identification and code numbers cannot be over-emphasized. The following sections contain all of the numbers necessary to complete the forms. The larger listings are placed in Appendices G and H.

School System ID Numbers and School ID Numbers - Both the school system ID and school ID numbers are listed in Appendix G. Both of these numbers are to be entered on the cover pages of all reporting booklets.

The following legend explains the grouping of School System ID Numbers:

001 through 351.....Municipal School Districts
390.....Community Colleges
392.....Junior Colleges
401 through 408.....Vocational School Districts
600 through 780.....Regional School Districts
801 through 885.....Regional Vocational School Districts
910 through 915.....County Agricultural Schools

The school ID numbers of schools located within each school system are listed in the column adjacent to the school system listing in Appendix G.

Level Code Numbers - Programs offered within departments can be described by their grade levels and are to be coded as follows:

30.0 Secondary - Occupational Education Programs designed for youth in grades 9-12.

40.1 Post-Secondary - Certificate - Post-secondary occupational education programs which provide only a certificate upon successful program completion and are designed primarily for

youth or adults who have completed or left high school and who are available for an organized program of study in preparation for entering the labor market.

40.2 Post-Secondary - Associate Degree - Post-Secondary occupational education programs which provide an Associate Degree upon successful program completion and are designed primarily for youth or adults who have completed or left high school and who are available for an organized program of study in preparation for entering the labor market. (Not including Junior or Community College Programs).

59.1 Junior and Community College - Certificate - Occupational programs offered in two-year colleges which provide only a certificate upon successful program completion and are designed primarily for youth or adults who have completed or left high school and who are available for an organized program of study in preparation for entering the labor market.

59.2 Junior and Community College - Associate Degree - Occupational programs offered in two-year colleges which provide an Associate Degree upon successful program completion and are designed primarily for youth or adults who have completed or left high school and who are available for an organized program of study in preparation for entering the labor market.

69.1 Adult Education Preparatory (part-time study) - Adult Occupational Education programs (often referred to as ETP) designed to provide training for persons who have already entered the labor market or who are unemployed and need retraining in preparing for a new occupation.

Identification Numbers and Codes (Cont'd)

69.2 Adult Education Supplementary (part-time study) Adult occupational education programs (often referred to as ETE) designed to provide training for persons who have already entered the labor market and need training to be updated or upgraded to achieve stability or advancement in their current employment.

69.3 Adult Education Apprentice - Adult programs of occupational training undertaken by a trade or industry, usually in cooperation with a public school; the apprentice works under a written agreement and is paid a graduated percentage of the journeyman wage while in training.

70.0 Comprehensive Employment Training Act (CETA) Funded by the Federal Government under Public Law 93-203 and administered by the Department of Labor. There are six titles under the act. Title I refers to training and job programs in skill centers to train people for jobs before they are contracted out to private firms for on-the-job training. Titles II and VI refer to employment of people in public service job areas with training offered in evening school programs.

89.0 Evening Practical Arts (EPA)- EPA programs are designed to provide the general public with training in special skills without any specific occupational objective.

99.0 Industrial Arts - Programs aimed at developing manual skill and familiarity with tools, machines, and processes which provide opportunities for creativity and problem solving and assisting individuals in the making of informed and meaningful occupational choices.

Type Code Numbers - The type code describes the kinds of students served by each occupational education program. The following 2-digit codes specify student types.

Identification Numbers and Codes (Cont'd)

01 - Regular Occupational Education Programs - Students served by regular occupational education programs represent the general population of students in that they are not organized on the basis of being handicapped or disadvantaged or of requiring a remedial program. However, some handicapped and/or disadvantaged students may be enrolled in a regular occupational education program.

02 - Disadvantaged Occupational Education Programs - Students served by a disadvantaged occupational education program have been selected on the basis of cultural, academic or economic disadvantage. These programs are exclusively designed to serve disadvantaged students who cannot succeed in the regular program.

Disadvantaged students are persons who have academic, socio-economic, or cultural handicaps that prevent them from succeeding in occupational education programs for persons without such handicaps. The term includes persons whose needs for such programs or services result from poverty, neglect, delinquency or cultural or linguistic isolation from the community at large. Physically or mentally handicapped persons are not included in this category. When identifying the disadvantaged students in your program, you should be able to answer "Yes" to at least two of these questions:

(1) Is the student from an ethnic or racial minority group such as American Indian (Native American), Black, Oriental (Asian American), Spanish Surname (Non-white), Spanish Surname (White), or from any other group where English is a second language?

(2) Does the student speak and/or write English inadequately because English is his second language?

(3) Does the student live in government-subsidized low-income housing?

Identification Numbers and Codes (Cont'd)

(4) Are the student and his family recipients of public assistance?

(5) Does the student live in substandard housing which is scheduled to be demolished or converted according to a plan such as urban renewal?

(6) Are the student's parent(s) chronically unemployed and/or disabled?

(7) Is the student eligible for a free hot lunch and/or milk program in school?

(8) Is the student's educational background in mathematics or his achievement in other academic areas inadequate to perform at the level required in regular occupational programs?

03 - Handicapped Occupational Education Programs - Handicapped programs are designed specifically to serve handicapped students. Note that some handicapped students may be disadvantaged as well. Handicapped students are persons who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled or other health-impaired persons.

04 - Remedial Occupational Education Programs - Students served by remedial occupational education programs have deficiencies in specific skills or techniques which must be eliminated before the students are admitted into a regular secondary level occupational education program.

05 - Pre-post Secondary Occupational Education Programs - Students served by pre-post-secondary occupational education programs lack the necessary academic and technical skills required for acceptance for a continuing course of study at the post-secondary level. This program can occur either at grade 12 or after grade 12.

Identification Numbers and Codes (Cont'd)

06 - Shared-time Occupational Programs - These programs serve students who are enrolled in a 'sending' school and who wish to receive occupational training. Typically, these would be secondary level students receiving training which leads to a certificate in an occupational area.

07 - Shared Exploratory Occupational Education Programs - These programs are designed to provide students who are enrolled in a 'sending' school (usually secondary) with a general overview of the knowledge and skills involved in one or more occupations. Exploratory programs aid students in choosing a program in an occupational area. Typically, these programs meet afternoons, may be upgraded, and are offered in vocational schools.

08 - Short-term Elective Programs - A short-term elective program is one of less than a school year duration which leads to the acquiring of salable job-entry skills and which is offered to students who are primarily enrolled in other programs.

09 - Exemplary Occupational Education Programs - These are programs funded in whole or in part by Part D of P.L. 92-318 (formerly 90-576).

10 - Group Guidance (Pre-vocational) - An organized program of occupational information and orientation usually implemented by a vocational guidance counselor.

Cooperative and Workstudy Arrangements - In many instances programs are structured to accommodate students who wish to be enrolled in educational programs and be simultaneously employed. The following describes arrangements which currently exist in the state to meet the needs of such students. Cooperative and Work Study arrangements are not programs as such but are used to describe curriculum designs. The following definitions are

offered to assist in the completion of Table 1.1 in Forms Booklet 1.0.

Cooperative - (State Approved) Instruction for persons enrolled in a school who, through a written cooperative arrangement between the school and employers, receive part-time vocational instruction in the school and on-the-job training through part-time employment.

Workstudy - A State-approved program of temporary employment for a student who has been accepted for enrollment, or is already in a vocational program and is in need of the earnings from such employment to commence or continue his vocational educational program. The employment arrangement is not a coordinated part of the student's vocational program.

Session Code Numbers - Session Code Numbers identify whether programs are offered during the day, evening or summer. The following one-digit codes are to be entered in the appropriate box where required.

1. - Day Session

2. - Evening Session

3. - Summer Session

MISOE Numbers - MISOE Numbers are to be assigned to each Forms Reporting Booklet by the Division of Occupational Education to establish connectibility between sets of reported data within schools. These numbers are for Division use only and should be ignored by the reporter.

Program Cost-Accounting System

This section of the Guidelines describes how the MISOE End-of-Year Reports are used in conjunction with the MISOE Fall Reports and the Superintendents' End-of-Year Pupil and Financial Report to provide schools that offer occupational programs with a program cost-accounting system.

In essence, the MISOE Census Data System is a PPBE System (Planning-Programming-Budgeting-Evaluation System) which in addition to being designed to satisfy all State and Federal census data requirements, has been developed for implementation. That is to say, the system has been developed to minimize the disruption of the current in-place system of financial accounting in Massachusetts. It works in an integrated manner with the existing accounting system, while at the same time using the non-financial data portions of the MISOE system to provide the bases for cost-effectiveness and program evaluation analyses. The MISOE financial accounting reports are uncomplicated in that they do not require the budget classification into the minute categories that usually characterize PPB or PPBE systems. These reports utilize the existing function categories to assign expenditures to occupational program areas and relates them to locally opted program objectives.

Thus, major objections to the PPBES approach as cited by Burkhead and Kirst are circumvented.

Burkhead, after his analysis of the California budget manual, reacted as follows:

> " The striking characteristic about all of these PPB systems is their unbelievable complexity, the attention to the minutiae of budgeting classification, and their costliness--in terms of manpower, paid- and unpaid-staff time, teacher time, community time." (1)

Kirst, in his paper, "The Rise and Fall of PPBS in California", discussed obstacles concerned with the setting of goals and objectives and the controversies surrounding this activity, as they relate to PPB Systems. He noted that

> " PPBS evoked competition among three perspectives on the nature of education: industrial, behavioristic and biological...In California, this (competition) led to the disillusionment with the PPBS concept itself and a realization that there were more than technical issues involved." (2)

These other issues involved such controversies as -

-Who should set those goals and what process should be used?

-How can a program budget structure be linked to systematic analysis of the relationship between "inputs" and goals?

While a detailed discussion of these issues is beyond the scope and not necessary to this introduction of the MISOE cost-accounting system, it is pointed out that the Census Data System as a whole has addressed these issues as they apply to Massachusetts, and the system as presented herein is considered to be a pragmatic solution to the problems. Although the MISOE Census Data System at this point in development deals only with

(1) Jesse Burkhead, "Economics Against Education, Teachers College Record, December, 1973, pp. 193-205.

(2) Michael W. Kirst, "The Rise and Fall of PPBS in California," Phi Delta Kappan, April, 1975, pp. 535-538.

industrial perspectives, it provides a reasonable means to resolve many of the non-technical issues of the PPBS notion by applying the concept of locally-opted broad-scoped objectives (bottom-up objective-setting process) with the idea of the top-down central management view of goal setting. The system is adaptable to include the cognitive and affective domain objectives as well as the psychomotor.

Approach - The present reporting system of the Department of Education, which consists mainly of the Superintendents' End-of-Year Pupil and Financial Report (EOY-PFR) and the Annual Federal Report to the Division of Occupational Education, provides limited information which can be used for decision-making purposes. These reports were established to satisfy State and Federal Reporting requirements and to provide data for the determination of reimbursement of expenditures under existing laws. Since the present reporting systems do not provide the necessary data to estimate costs at the individual program level, the MISOE Census Data System has been developed to supplement the Superintendents' End-of-Year Pupil and Financial Report (EOY-PFR) and to obviate the need for the Annual Federal Report to the Division of Occupational Education.

The following outline enumerates the steps involved in estimating the costs of individual occupational programs. These steps are amplified in further detail in subsequent sections.

Program Cost-Accounting System (Cont'd)

(1) Obtain aggregate expenditures (1000-9000 codes) for all schools in a school system from the EOY-PFR.

(2) Obtain expenditures (1000-9000 codes) for each school offering occupational programs within the school system, and also capital expenditure data (buildings and equipment).

(3) Prorate indirect expenditures to individual occupational programs.

(4) Obtain direct operating expenditures for individual occupational programs and also direct capital expenditures for equipment.

The determination of cost estimates on a program level in this manner will provide the data base for cost-effectiveness and cost-benefit analyses. Such analyses are the basic tools in the decision-making process for educational managers at all levels. The section, "Data Base for Decision-Making" discusses the potential outputs of the MISOE cost system and their implications.

NOTE: It should be noted that the MISOE Census Data System actually determines costs by department or whatever administrative unit a school utilizes in its organizational structure. Therefore, if costs are estimated by department, these costs are also the program costs if there is only one program in the department. If, however, there is more than one program per department, then the department cost will be the cost of the combined programs within that department.

At this point in time, in the interest of minimizing complexity, costs will be determined at the department level.

Data Requirements - There are several basic forms which provide the data that are necessary for the determination of program costs.

Program Cost-Accounting System (Cont'd)

These forms are included in five reports, namely,

(1) End-of-Year Pupil and Financial Report

(2) MISOE Fall School Head Report

(3) MISOE Fall Department Head Report

(4) MISOE End-of-Year School Report

(5) MISOE End-of-Year Department Report

The data of interest for each form is discussed below and examples of completed forms are given in Appendices C,D,E,F. It should be noted that the End-of-Year Pupil and Financial Report (EOY-PFR) is used as a basic source of expenditures for occupational programs offered within a school system and that the MISOE Census Data System has been designed as a "spin-off" of this report. Expenditures are first broken out for occupational and non-occupational programs by school (for systems that contain more than one school) to determine indirect costs and, second, direct-cost expenditures are broken out by departments offering occupational programs. Methods to estimate capital costs are also included.

End-of-Year Pupil and Financial Report (EOY-PFR)

The End-of-Year Pupil and Financial Report is a general report prepared at the end of each school year by school systems and is submitted to the Department of Education. This report is comprised of three sections, viz., pupil, financial, and transportation. The expenditure information for the entire school system which is reported in the financial section is that which provides the basic

Program Cost-Accounting System (Cont'd)

data source from which costs of occupational programs by school may be determined. The required data are reported in Tables 1 and 2, and in Schedules A through G, which breaks out financial detail for Table 1. (These forms are given in Appendix E.)

Table 1 provides a summary of school committee expenditures by program areas and by function, while Table 2 provides a summary of expenditures by other local municipal agencies for school system purposes. The combination of Tables 1 and 2 provides the total expenditures for the entire school system. However, the expenditure information is not reported in a manner that allows the convenient breakout of expenditures by occupational programs and by school. In addition, an examination of the breakouts by schedule which are reported, clearly indicates that there is a wide latitude given to a school system as to what schedule occupational programs are to be reported. These schedules include breakouts by regular day (A), special education (B), regular evening (C), regular vacation (D), Occupational day (E), occupational evening (F), and other school (G) programs. For instance, most occupational programs reimbursed under Chapter 74 funds are customarily reported in Schedules E, F, or G, whereas occupational programs such as Business/Office, Distributive Education, and Consumer and Homemaking are

Program Cost Accounting System (Cont'd)

reported as regular day programs in Schedule A. Thus, even in cases where there is only one school offering occupational programs in the system it is impossible to break out expenditures as being occupational from the End-of-Year Pupil and Financial Report.

Since the existing End-of-Year Pupil and Financial Report does not provide expenditure information in a format which allows the determination of occupational education costs on a school basis nor on a program (or department) basis, MISOE has developed supplementary data collection instruments which collect expenditure information at these two levels.

MISOE End-of-Year School Report - Reporting Booklet 3.0, Part B, of this report is the supplement which requests the separation of expenditures by school and program areas which were reported in aggregate in the EOY-PFR. Thus, Reporting Booklet 3.0 is intended to provide total occupational and non-occupational expenditures for individual schools within the system which offer occupational programs. These expenditures are requested in Table 3.2 "Expenditures for Instructional and Supportive Services", which includes totals for instructional and supportive Services (1000-9000 expenditure codes), Table 3.3 "Expenditures by City (or Town) for Services Provided to School" (1000-9000 expenditure

codes) and Table 3.4, "Supplementary School Information", which collects school and land values for use in the determination of capital costs.

MISOE End-of-Year Department Report - Reporting Booklet 4.0, Part B, of the MISOE End-of-Year Department Reports is designed to determine direct expenditures by Departments offering occupational programs. These direct expenditures can be easily merged with the End-of-Year School Reports previously described to estimate individual program costs. The forms in Booklet 4.0 are as follows: Table 4.22 "Current Occupational Department Expenditures" and Table 4.23, "Capital Expenditures for Department Equipment Purchases". Table 4.22 requests the expenditures for the following functions, which can be directly allocated to each department (or instructional area), teaching salaries (2300-01), teaching supplies (2300-01), teaching supplies (2300-05), textbooks (2400), audio-visual (2600), guidance (2700), Educational TV (2900), Maintenance of Equipment (4230), and any other 1000-5000 expenditure codes not included above but which can be directly allocated. Table 4.23 requests expenditures for Acquisition of Equipment (7300) and Replacement of Equipment (7400), by department.

MISOE Fall Reports - In addition to the financial data, other information which is necessary for use in the proration

of indirect expenditures to individual departments (programs) are collected by the MISOE Fall Reports. The data collected by these reports are outlined below:

The Fall School Head Report provides the following types of information on an individual school basis:

Student Enrollment Data

- by total for school and grade
- by total for occupation education and grade
- by occupation department (or program area)

Teachers, Department Heads & Administrations Data

- the composition of the administrative staff of the school
- staff characteristics of occupational teachers and department heads

Capacity of Instructional Area Data

- total capacity of school by type of room and floor space
- total capacity of school by type of room and floor space for occupational education departments (or program areas)

The Fall Department Head Report provides the following types of information for the individual occupational education department:

Student Enrollment in Department Data

- by final grade
- by lower grades

Utilization of Student's Classtime Data

- by final grade
- by lower grade

Program Cost-Accounting System (Cont'd)

Utilization of Department Instructional Area Data

- by rooms

Terminal Objectives Data

- by department

- by final grade

Estimating Program Costs - The process for determining costs of individual occupational programs begins with the utilization of the Superintendents' End-of-Year Pupil and Financial Report (EOY-PFR) to determine total expenditures in the school system for both occupational and non-occupational programs. The MISOE End-of-Year School Report - Reporting Booklet 3.0, Part B, separates these aggregate expenditures by school and also determines school expenditures by schedule as they contribute to the data reported in the EOY-PFR for the school system. Thus, having broken out the expenditures in this manner, it is possible, by utilizing various proration methods, to determine the proportion of indirect instructional and supportive services that can be applied to occupational programs. The MISOE End-of-Year Department Reporting Booklet 4.0, Part B, collects expenditures that are directly associated with each occupational education program, and when the indirect costs previously determined are added to these direct costs, a close estimate of the cost of the program has been achieved. Capital costs are also included in this process and methods of estimating them are discussed below.

The source of the information, as well as its application in determining program costs is given:

Program Cost-Accounting System (Cont'd)

1. Source: Superintendents; End-of-Year Pupil and Financial Report

   Application: Determination of aggregate occupational and non-occupational expenditures for a school system

2. Source: MISOE End-of-Year School Report, Reporting Booklet 3.0

   Application: Determination of aggregate occupational and non-occupational expenditures for an individual school

3. Source: MISOE Fall School Head Report - Reporting Booklet 1.0

   MISOE Fall Department Head Report - Reporting Booklet 2.0

   Application: Enrollment, space utilization, and utilization of student class time data used as basis for proration of indirect costs. Staff salaries by department are also collected in these reports.

4. Source: MISOE End-of-Year Department Report - Reporting Booklet 4.0

   Application: Determination of direct expenditures for departments offering occupational programs and also for determining capital costs.

Following is a description and discussion of the process by which estimates of program costs can be made and of the problems encountered.

School System Expenditures - Initially available from the Superintendents' End-of-Year Pupil and Financial Reports (EOY PFR) for a given school system are the total aggregate expenditures for occupational and non-occupational programs broken out into program areas (regular day, special education, regular evening, regular vacation, occupational day, occupational evening and other). Several problems are encountered when attempting to deal with this report in the determination of program costs. First, expenditures in Tables 1 and 2 are aggregated for the entire school system so that it is not possible to determine expenditures associated with a particular school if there is more than one in the system offering occupational education. In addition, the expenditures in Table 1 are reported in schedules which generally relate to various program areas within the school system but which do not explicitly include all occupational programs within a single, identifiable program area. The list of schedules by program area in which all expenditures are reported are as follows:

Program Cost-Accounting System (Cont'd)

Schedule A - Regular Day Programs

Schedule B - Special Education Programs

Schedule C - Regular Evening Programs

Schedule D - Regular Vacation Programs

Schedule E - Occupational Day Programs

Schedule F - Occupational Evening Programs

Schedule G - Other School Programs (Junior College, Adult Education, Evening Practical Arts)

It is not unusual for occupational programs to be reported in more than one schedule. In fact, Business/Office, Distributive Education and Consumer-Homemaking programs that have been traditionally offered in regular high schools are being reported in practically all instances in Schedule A as regular day programs, even though they are occupational programs in that they train students with job-entry skills to meet business and industrial needs. Occupational programs are similarly being reported in other schedules, depending on many varying factors.

Table 2 contains expenditures by the city (or town) for school system purposes which may not be readily attributable to a particular school and the distribution of these indirect expenditures must be carefully prorated among levels, schools, and program areas within the system if they are to be properly applied to particular programs.

Program Cost-Accounting System (Cont'd)

Expenditures by School - Since the EOY-PFR does not provide the necessary expenditure data to directly determine cost estimates of individual programs, MISOE has designed data collection instruments which can be used in conjunction with this report to derive such cost estimates. The purpose of the MISOE End-of-Year School Report - Reporting Booklet 3.0, Part B - is two-fold. First, it is intended to break out the combined occupational and non-occupational expenditures as school totals for systems that contain more than one school offering occupational programs. Secondly, expenditures are broken out by Schedule for each school. The next step is to determine what portion of the school total expenditures are associated with Occupational Education.

Thus, having the expenditures so broken out by school, it is now possible to apply proration techniques to selected expenditures for program areas that contain occupational programs. Two proration methods are illustrated below to demonstrate how total school expenditures may be distributed percentage-wise across the various program areas. While both methods use enrollment as the basis for proration, the first uses total school enrollment, while the second uses day school enrollment only. It is first necessary to

Program Cost-Accounting System (Cont'd)

convert the student enrollment for all program areas into comparable units, i.e., student-hours per program area, as follows:

Student Enrollment by Program Area	X	Days in School	X	Hours in School	=	Student-Hours Per Program Area

Then Formula (1), based on school enrollment, would be as stated as follows:

FORMULA (1)

$$\text{Percent of Total School Enrollment} = \frac{\text{Student-Hours Per Program Area}}{\text{Total School Enrollment}} \times 100$$

Formula (2), based on day school enrollment, would be stated as follows:

FORMULA (2)

$$\text{Percent of Day School Enrollment} = \frac{\text{Student Hours per Day Program Area}}{\text{Total Day School Enrollment}} \times 100$$

Program Cost-Accounting System (Cont'd)

Sample calculations of percentages are given below:

FORMULA (1) - PRORATION BASED ON TOTAL SCHOOL ENROLLMENT

Program Area	Schedule A Regular Day	Schedule B Special Education	Schedule C Regular Evening	Schedule D Regular Vacation	Schedule E Occupa-tional Day	Schedule F Occupa-tional Evening	Total
Total No.Stu-dents Enrolled	565	70	430	210	75	70	1,420
Days in School	180	180	30	30	180	30	--
Hours in School	8	8	4	4	8	4	--
Total Stu.Hrs.	813,600	100,800	51,600	25,200	108,000	8,400	1,107,600
% of School Enrollment	73.5%	9.1%	4.7%	2.3%	9.8%	0.6%	100.0%

FORMULA (2) - PRORATION BASED ON TOTAL SCHOOL ENROLLMENT

Program Area	Schedule A Regular Day	Schedule B Special Education	Schedule F Occupa-tional Day	Total
No. of Students Enrolled in Day School	565	70	75	710
Days in School	180	180	180	-
Hours in School	8	8	8	-
TOTAL-Student Hrs.	813,600	100,800	108,000	1,022,400
% of Day School Enrollment	79.6%	9.9%	10.5%	100.0%

Program Cost-Accounting System (Cont'd)

As an example of applying Formula (1), let it be supposed that the total cost of administrative services in a given school is $2,250, and it is desired to prorate this amount to all students because they all absorb some of the general school system administrative services. Formula (1) would be applied in the following manner to determine the amounts which would be applied to each program area:

Code 1000 Administrative Services

Regular Day	73.5%	of $ 2250	=	$ 1653.75
Special Education	9.1%	of 2250	=	204.75
Regular Evening	4.7%	of 2250	=	105.75
Regular Vacation	2.3%	of 2250	=	51.75
Occupational Day	9.8%	of 2250	=	220.50
Occupational Evening	0.6%	of 2250	=	13.50

Formula (1) would also be applied to the proration of maintenance of plant expenditures (4000 Code) since all students generally benefit from these services. They include custodial, utility, maintenance of grounds, and maintenance of buildings services. The distribution of these expenditures to the various program areas would be made in a similar manner as were the administrative costs in the previous example. Formula (2) would be used for expenditures which are primarily absorbed by day school students and the percentages would be determined and distributed to the various program areas in the same manner as for Formula (1) above.

Program Cost-Accounting System (Cont'd)

There are several other proration methods and the most common of these have for a basis either: (1) time, (2) average daily membership (enrollment), (3) time-floor-area, (4) hour consumption, or (5) quantity consumed.[1]

There are many considerations in the selection of a method to prorate expenditures, the most important being that it have a direct bearing to the function or service that is being prorated. For example, floor area has little, if any, direct bearing on determining the workload of a teacher. Therefore, it would not be reasonable to utilize it as a basis for prorating teachers' salaries. However, floor area is a significant factor in determining the workload of a building custodian and would be a desirable basis in the proration of custodial services.

Capital Costs - The assignment of capital expenditures to a given occupational department in addition to current operating costs is necessary in order to determine the total cost of occupational training at the department level. Capital expenditures include depreciation of buildings and equipment and also opportunity costs for the use of public funds. The proration of capital expenditures using enrollment would provide

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(1) Reference: USOE Handbook II

total costs on a per-pupil basis. It would be expected that substantial differences would be indicated between total costs per pupil and instructional costs per pupil depending upon the nature of departments examined.

There are several alternative methods for determining capital costs in education and there are conflicting views as to which method is the best to apply. Generally there is little knowledge available as to what type of capital expenditure information is available from school systems but the MISOE CDS has included two forms that have been designed to collect capital expenditure information which may be used in the calculation and assignment of costs to occupational departments.

Table 3.4 in the End-of-Year School Report is included to determine the quality of information which is available at the school level. It includes:

Table 3.41 Original Cost of School and Year of Construction

Table 3.42 Cost of Additions and Years of Construction

Table 3.43 Current Value of Buildings, Land and Equipment

At the department level, Table 4.23 (Capital Expenditures for Department Equipment Purchases) of the End-of-Year Department Report has been included

to collect year-to-year capital expenditures (7300 and 7400) which can be directly associated with a particular occupational department. It is anticipated that eventually, after several years of this kind of information being collected, that depreciation of equipment can be calculated for each individual occupational department within the school. Since some training programs use capital-intensive method of teaching (i.e., heavily equipment-oriented) there may be substantial differences in equipment depreciation expenditures between departments and across schools which offer the same type of programs.

Based on a review of the data collected, a final decision will be made as to which method of estimating capital costs should be used in MISOE.

Following is a discussion of methods available for the determination of capital costs. It is included here to provide perspective on how the data requested can be applied for this purpose.

Capital costs can be broken down into four different elements:

a) Site acquisition costs;

b) Capital improvements to the site;

c) Physical plant and building costs; and

d) Equipment costs

Program Cost-Accounting System (Cont'd)

There are serious problems involved in measuring capital costs to education. These problems stem from several physical and institutional factors. Two of the most important factors are: (1) The physical plant of the school usually has an economic life longer than the period of training for any given educational cohort; (2) The services of this capital stock are not easily valued in market terms.(1)

Four possible treatments for valuing this capital stock exist. First, one can argue that once the capital stock exists, especially the physical plant and buildings, it becomes specific to the educational process and thus has no alternative use. In this case, social capital costs would be zero in the short run, since no opportunity cost is involved in their use for a cohort of students which uses the capital after the decision was made to create the school. This is a tenuous assumption, though, for it is easy to discover alternative uses for such capital stock. Thus, the value of the educational physical plant is not zero in competing uses. But since it is not a perfect sub-

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(1) Adapted from Teh-wei Hu, Maw Lin Lee, Ernst Stromsdorfer and Jacob J. Kaufman. A Cost-Effectiveness Study of Vocational Education, The Pennsylvania State University, Institute for Research on Human Resources.

stitute for these competing uses, the market value of the competing uses does not exactly reflect the opportunity cost of using the non-renovated physical plant for educational purposes.

Second, historical costs of building construction and site acquisition can be used. However, these costs do not reveal what the current economic value of the capital resource is. Current economic value could be less than, equal to, or greater than historical cost.

Third, the use of replacement costs is a possibility in the attempt to measure capital costs. However, it is obvious that in many cases it would cost more to replace exactly a building than the building is currently worth in economic terms. The use of replacement costs would over-value the capital resource, given a rising price level and assuming no compensating technological change in construction technique.

Fourth, an estimate of current assessed valuation could be used to arrive at a measure of the capital cost. However, the valuation standard used becomes critical. In actual practice, the valuation standard amounts to a combination of historical costs adjusted by a price index of replacement cost so that this measure is no better than the replacement cost measure.

In short, it is not obvious what price resulting among these four choices should be attached to the

capital inputs to get a measure of the opportunity costs.

An alternative technique for estimating the rate of capital use lies in employing the "capital recovery factor" (CRF). The application of this technique automatically accounts for both rent (interest) and depreciation.

The capital recovery factor is that factor which ". . . when multiplied by the present value of capital costs, is the level (average) end-of-year annual amount over the life of the project necessary to pay interest on and recover the capital costs in full. (1)

The formula is as follows:

$$C = \frac{C_o i\ (1 + 1)^n}{(1 + 1)^n - 1}$$

Where

C=the capital recovery factor (annual capital cost)

C_o=present value of capital in use

i =social opportunity cost rate of capital or investment funds

n =number of years over which benefits (of the capital in question) are returned; that is, the project life.

In some respects, this technique is no less arbitrary than that which imputes rent and depreciation. Apart from the problem of establishing the present value of the capital in use, essentially arbitrary

(1) See Jack Hirshleifer, et al., Water Supply--Economics, Technology, and Policy (Chicago: University of Chicago Press, 1960), pp. 1958-59.

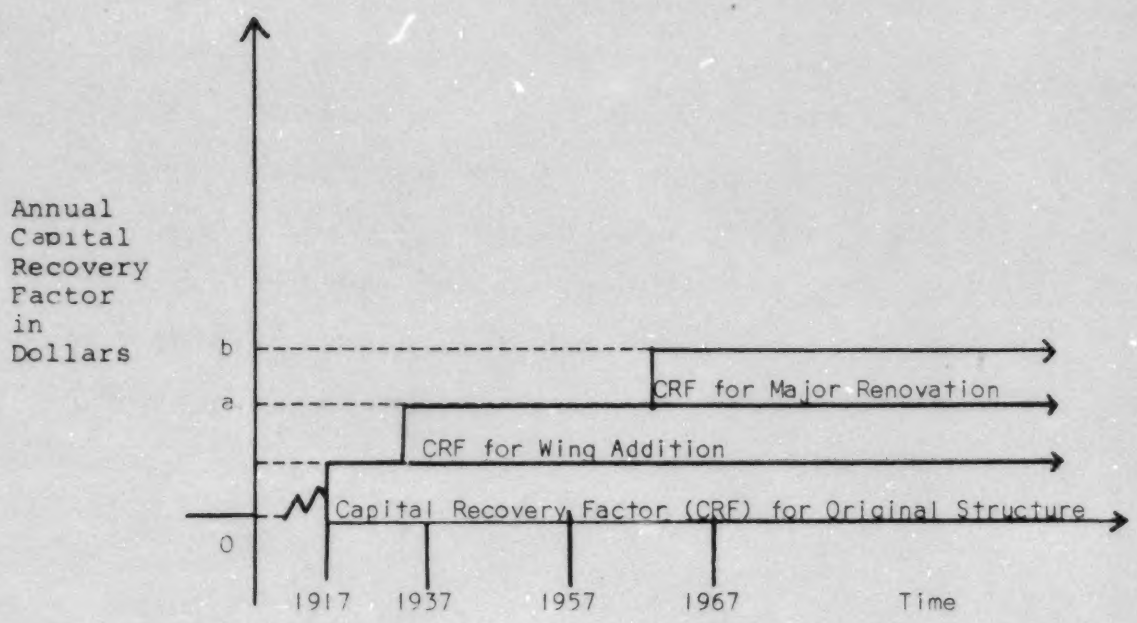
judgements must be made with respect to the values of n and 1.

Figure 1 describes how a hypothetical capital usage stream would appear for a school building built in 1917 with one wing added in 1937 and a major renovation occurring in 1957, given appropriate assumptions on the social opportunity cost of Investment funds and the time period concerning the flow of benefits related to each capital item. (A major renovation is a renovation which increases the economic value of the capital item in question. At some point, arbitrary distinctions have to be made between what is renovation and what is maintenance.)

The time period over which costs are measured in this illustration extends from fiscal year 1956 through fiscal year 1960. So, for example, average annual capital costs for physical plant in the example below would be Oa for fiscal year 1956 and Ob for fiscal year 1959.

FIGURE 1

An example of Cost Imputation Based on the Capital Recovery Factor



Several problems exist with the use of this technique. The first is that the CRF does not necessarily indicate the amount of capital used in any given year. It only states the level annual amount needed to recoup the principal and social opportunity cost, that is, interest, given the project life. The actual amount of capital used up in any given year could be the same, more, or less than this amount.

Related to this problem is the fact that more than one cohort of students may utilize a given capital

item during the life of that item. For instance, if a capital item has an economic life of n years and it takes an educational cohort three years to complete its training (investment) process, then at least n-2 cohorts will make use of that capital stock. If a capital item is installed in an on-going educational project, given that it takes 3 years to train a cohort, three cohorts are always using that capital item. Here there is a joint cost problem. In any time period, how much of the capital use is due to each cohort?

Since there are no satisfactory solutions to these problems, the CRF may be used on the assumption that each cohort of students uses the capital stock at an equal rate during the investment (schooling) process.

Another method, imputation of depreciation and implicit rent, has been outlined by Schultz.(1) According to this method, the replacement value of school assets is first calculated. An interest rate (such as 6 per cent) is chosen to calculate "implicit rent" (the foregone opportunity to rent the premises for non-educational uses.) Further, depreciation is calculated by estimating (1) a given distribution of school asset

(1) Theodore W. Schultz, "Capital Formation by Education," Journal of Political Economy, Vol. LXVIII (December, 1960) pp. 471-583.

values among land, buildings, and equipment and (2) the expected life of each class of assets. Using various sources, Schultz concluded that implicit rent and depreciation amounted to approximately 8 per cent of the value of school assets.

Schultz estimated that the implicit rent on plant, grounds and equipment for a comprehensive high school is 8 per cent of the book value of the physical property. His estimate assumes no depreciation on the land but a 2 per cent per year depreciation on buildings and improvements and a 10 per cent per year depreciation on the value of the equipment; all calculations assume the use of the straight line method of computing depreciation. Schultz also assumes the interest rate to be 5.1 per cent. Since the cost of money is now considerably higher, the interest rate should be adjusted upward to, say, 6.0 per cent. He also assumes that 15 per cent of the value of the total cost is attributable to land, 15 per cent to equipment, and the remaining 70 per cent to buildings and improvements. Therefore, for each $100 of assets the calculation of implicit rent is as follows for a comprehens gh school:

Interest charge (6.0%)	$6.00
Depreciation & Obsole :	
a. Buildings & Impro (70% x 2%)	1.40
b. Equipment (15% x	1.50
	$8.90= 8.9%

Program Cost-Accounting System (Cont'd)

For a self-contained vocational high school total cost calculation will be different from that of the comprehensive high school in that different weights will be employed. The reason for this is that vocational schools tend to require more equipment and less land area than comprehensive high schools. Thus, for the self-contained vocational high school, 67% of the total is attributable to plant, 25% to equipment, and 8% to the land. Assuming that the interest rate is 6.0% for each $100 of assets, the calculation of implicit rent would be as follows for the self-contained vocational high school:

Interest charge (6.0%)	$6.00
Depreciation and Obsolescence:	
a. Buildings and Improvements (67% x 2%)	1.34
b. Equipment (25% x 10%)	2.50
	$9.84 = 9.94%

Kaufman and Cohn suggest that a convenient source of information for the replacement value of assets is the insured value of school buildings and equipment. Capital costs can be computed by amortizing the insured values on the basis of estimates of expected lifetimes of assets. (1)

(1) J. J. Kaufman and E. Cohn, "Conceptual Issues in Cost-Impact (Benefit) Analysis", Occasional Paper #9, Project MISOE (September, 1972).

Program Cost-Accounting System (Cont'd)

However, calculation of an implicit rent based on the insurance value of building and equipment would only be possible for school systems that do insure their school property. If a substantial number of communities are self-insured this method could not be used because of the lack of insurance values to estimate implicit rents.

Another source of information for the replacement value of assets is the Massachusetts State Department of Education--Division of School Building Assistance. They can provide information on the costs of new schools constructed in the State, during a particular period, by school type. Thus, the average per-pupil cost could be computed from subsamples of self-contained vocational high school and comprehensive high schools. This technique was used in the past in two cost-benefit studies of education in Massachusetts - The Corazzini study of Worcester and the Downey study of Haverhill. In the Downey study, during the sub-sample period, two new vocational schools with capacity enrollments of approximately 500 students were completed. The estimated total cost per pupil for these schools was given and used as a basis for determining the average estimated total cost per pupil for new vocational schools, which was $7,238.33. The same procedure was used for new regular high schools, of which there were five.

Program Cost-Accounting System (Cont'd)

The average estimated total cost per pupil for new regular high school was $3,949.76. The replacement cost of Haverhill High School and Vocational School were then estimated by multiplying the average estimated total cost per pupil by the enrollment of each school.[1]

Data Base for Proration - The Fall Reports, viz., the MISOE Fall School Head Report - Reporting Booklet 1.0 and MISOE Fall Department Head Report - Reporting Booklet 2.0 provide enrollment and other data which can be utilized in proration of expenditures to various program areas within a school and to departments offering occupational programs. The Fall and End-of-Year Reports are integrated, in that enrollments are related by means of a coding system to teachers, program objectives, and costs of operating specific departments within which occupational programs are being offered. A breakdown of student class time is provided by the Fall Reports which indicates the mix of academic and occupational training received by students within a department. Such data are useful in the proration of expenditures to academic and occupational departments Utilization of instructional area data provides the

(1) G. F. Downey, "Cost-Benefit Study of Vocational Education in Haverhill, Massachusetts" (Unpublished Dissertation) Boston College, June 1971

basis for the prorations of expenditures related to building facilities.

Individual faculty members and department heads, their characteristics and salaries are keyed to occupational departments and to occupational programs within departments, which provides the means of conveniently assigning teaching and administrative salaries to these departments (programs). Teaching salaries represent the largest component of the current cost of a program, and they can be directly assigned to individual occupational departments (programs) in the MISOE System.

Expenditures by Department- The MISOE End-of-Year Department Report - Reporting Booklet 4.0 essentially collects current costs which can be directly allocated to a given department offering occupational education. These direct expenditures, when merged with the direct salaries collected by the Fall Reports, provide a close estimate of all current expenditures that are directly allocable to the given department.

Indirect current expenditures prorated from school totals reported in Booklet 3.0 (by using Fall Report data as bases for proration) and applied to the given department, will yield an estimate of the cost of the individual department program, which can then be used as a basis for cost-effectiveness and cost-benefit analyses by educational administrators.

Program Cost-Accounting System (Cont'd)

To summarize the process of estimating the program costs, the EOY-PFR is utilized as the basis data source for school system expenditures. The breaking out of this information on a school basis by means of the MISOE End-of-Year School Report allows indirect department (program) costs to be determined by proration. The data bases for the proration formulas are collected by the MISOE Fall Reports and include enrollment, floor space and utilization of student class time data. In addition, information is collected in the End-of-Year School Report regarding capital expenditures, which allows them to be prorated and subsequently applied to determine total costs of individual departments (or programs). Direct department costs are collected by the End-of-Year Department Report.

Data Base for Decision Making

This section describes in broad terms the nature of the MISOE data outputs (previously described in detail) and how these data can be used by managers of occupational education for policy-making and decision-making purposes.

The MISOE Census Data System (CDS) provides a complete description of inputs to occupational education by collecting expenditure and non-expenditure data on a program level. In terms of non-expenditure data, CDS provides (1) staff and enrollment information which can be used to generate pupil/teacher

ratios, (2) facility utilization information which can be used to determine efficiencies of building usage, and (3) the utilization of student's class time to determine the mix of academic and occupational education in a program. In terms of expenditure inputs to occupational programs, current and capital cost of training will be available for each occupational department on a total and per-pupil basis. Department expenditures (or program) will, therefore, be available in terms of total costs per department, total costs per pupil; and also total instructional and supportive costs per department will be available on a total and per-pupil basis.

In addition to the inputs to occupational education, job-entry skills (TERMOBs) which can be used to describe educational outputs have been developed as an integral part of CDS. When these TERMOBs (or job-entry skills) are related to programs described by USOE codes, a convenient description of educational outputs is made possible. When this information is merged with the financial data, comparisons can be made between schools or school systems on many levels: types of programs offered, cost per pupil, number and type of job-entry skills learned, impact of students on society--the list goes on.

This type of data can be of great importance to occupational education, which has recently come under close scrutiny because of the increased cost of producing a skilled tradesman, especially at the secondary level. There is a tendency for all

education to automatically absorb a very major part of increased resources as revenues in a state rise. That education does absorb such a substantial part of the government budget is creating serious problems, particularly with public opposition to rising taxes and the growing demand on government for services to meet other needs.

Apart from the fact that occupational education must compete for limited funds, it now has to justify its higher cost by demonstrating that the use of its funds results in maximum output in relation to the money made available to it. In other words, it must become accountable to the public and attempt to demonstrate that its type of education yields results consistent with the goals that society has set for it. Under the present system, such an accounting is impossible, and occupational education may soon suffer for it.

MISOE CDS integrated with the TERMOB concept provides a potential solution. Hypothetically, let us consider two schools. Each offers an automotive mechanics program designed to meet local manpower needs. Although each school consistently graduates the same number of students, it costs the first school 30 per cent more per pupil to produce a graduate.

The citizens and school committee in the first community know only that it costs them 30 per cent more than the other community to turn out an auto mechanic, and they are justified in questioning that cost difference. They may question whether their school is being managed efficiently, if the money is

being used wisely, and if their graduates are better prepared. They may even suggest that some changes should perhaps be made.

Basis for Cost-Benefit Analyses - At present there is no way for the school to justify its higher cost. By using TERMOBs, however, it can be demonstrated that its auto mechanics can perform 50 job-entry skills as compared with 35 in the other school, and that it accommodates a number of handicapped students in the program who require special equipment, special teachers, and special attention. By following up its graduates, the higher-cost school can show that more of its graduates find jobs, earn more, and return $7 for every dollar invested in them as compared with $3 for the other school.

The stage is now such that a cost-benefit analysis can be performed to determine if the educational outcomes are worth the additional expense. The last point is important for it would be an obvious advantage to occupational educators if they could determine that what the student learns in the classroom is clearly connected to the positive effects he ultimately has on society. These positive effects, both economic and non-economic, would include such factors as productivity in terms of employment,

Date Base for Decision-Making (Cont'd)

production of goods and services, and tax revenues, as well as the student's contribution to his family and society. It should be noted that cost-benefit analyses are included as such in the MISOE Sample Data System as a longitudinal study to determine the impact of the student on society over time.

Basis for Cost-Effectiveness Analysis - A record of the TERMOB achievement of students within an occupation combined with information describing the differential career patterns of graduates over several years could be useful input to policies governing the substance of vocational education programs for future waves of students. With program goals specified by TERMOBs, definitive job-entry skills that students demonstrate on graduation can be discussed more objectively with advisory councils, employers and lay citizens to determine (1) if obsolete skills are being taught, (2) if skills that should be taught to keep up with technological change are being neglected, and (3) if acceptable levels of performance are being met.

Because of their structure, TERMOBs can be used as the basis to determine program effectiveness and also cost-effectiveness. Testing against locally opted TERMOBs with quality scores developed on a 1 to 5 scale (with a score of less than 2 designating failure) can be used to determine the acheivement level of students for each job-entry skill offered. This represents an important development in evaluating vocational education programs in terms of achievement without enforcing rigid standards across programs.

It is emphasized that the determination of student achievement levels and program effectiveness is not to be interpreted as being part of CDS, but that CDS provides the data base for such studies to be conducted. The actual studies of this nature are included in the MISOE SDS design.

INSTRUCTIONS

This section contains step-by-step instructions for the reporting of information in all of the MISOE Census Data System reporting booklets. The reporting booklets are separated from the "Guidelines and Instructions for Reporting" booklet, and all booklets are color-coded for easy identification. The color codes are given in the Preface of this publication.

Fall School Head Report - Reporting Booklet 1.0

Reporting Booklet 1.0 consists of seven forms, listed below, which were designed to collect data from the heads of schools, i.e., principals or directors as the case may be.

Table 1.1 Student Enrollment by Department (or Instructional Area)

Table 1.11 Total School Enrollment and Occupational Enrollment by Grade

Table 1.12 Total Community College/Junior College Enrollment and Occupational Enrollment

Table 1.2 School Administrative Staff

Table 1.3 Occupational Teacher and Department Head Staff Survey: Staff Characteristics

Table 1.4 Capacity of Instructional Area for Occupational Education

Table 1.41 Total Capacity of School Instructional Area

The data types to be collected are discussed below and are followed by step-by-step instructions for the completion of the forms.

This report is to be forwarded directly to the Division of Occupational Education, 182 Tremont Street, Boston, Massachusetts 02111. The cover page is to be completed in its entirety, referring to pages 24 and 25 of the MISOE Census Data System Guidelines and Instructions for Reporting for an explanation of identification and code numbers. It is important to include the name of the person preparing this report and his telephone number on the cover page so that he may be readily reached in the event it becomes necessary to clarify any of the reported information.

Table 1.1 Student Enrollment by Department

Table 1.1 requests data on student enrollment by department or instructional areas as the case may be. These instructional areas are usually referred to as programs and are comprised of a sequence of courses, such as Automotive Mechanics and Automotive Body & Fender Programs. The data requested in Table 1.1 is that for the administrative unit as it exists in your school, whether it be a department or an instructional area. The enrollment is requested to be categorized by instructional program level, type of program, by session, by grade. It is also requested that the students be identified as members of majority or minority groups, and also as regular, disadvantaged and/or handicapped student types.

Instructions for Table 1.1

Step 1 - Refer to line, "Department Names." List across the line the names of all departments or administrative instructional areas within your school where students are enrolled exclusively in that area. Using a separate column for each, begin by listing program areas (or departments) for the day session for the final grade (i.e., grade 12), followed by the lower grades (i.e., 11, 10, 9). Then for the same departments or instructional areas, and using a separate column for each, list other sessions, program types and levels. When all variations of programs within a given instructional area are reported, begin with another department and report all of the variations. For schools offering on the order of 20 programs, 70 to 80 columns may be needed to report all program vaiations. Note that the summer session enrollments to be

Table 1.1 Cont'd

reported here are for those summer programs offered in the summer preceding this October.

In cases where students are enrolled in more than one department (and learning entry-level skills in each) list the department names together (e.g., Distributive Education and Office Education.) Lastly, where exploratory programs are offered, (generally in grades 9 and 10,) list the names together at the top of the column (e.g., Electrical, Woodworking, Plumbing.)

NOTE: An example of a completed Table 1.1 is given in Appendix C.

Step 2 - Refer to line 2, "USOE Codes," and enter the lowest order applicable code which best describes each department, (e.g., 14.0000, Business/Office Education; 04.0800, General Merchandising; 17.0302, Auto Mechanics; 17.0300, Automotive.)

Step 3 - Refer to line 3, "Grade," and enter appropriate grade level. A separate column is to be completed to record the enrollment for each grade within the department. Use letter "A" to designate Adult programs.

Step 4 - Refer to lines 4, 5 and 6, "Level Code, Type Code, and Session Code," and enter the appropriate code to describe the program for the subject department. A separate column is to be completed to record enrollment for each level, type and session variation.

Step 5 - Refer to line 7, "Exploratory," and indicate if the grade is of the exploratory type.

Table 1.1 Cont'd

Step 6 - Refer to Line 8, "Cooperative," and indicate the number of students in this grade who are enrolled in a cooperative arrangement.

Step 7 - Refer to line 9, "Workstudy," and indicate the number of students who are enrolled in a work/study arrangement.

Step 8 - Refer to line 10, "Enrollment". This enrollment data is to include all students who have an occupational objective as a matter of record and who are enrolled in a program (or sequence of courses) that is specifically designed to prepare them for employment through the acquisition of entry-level skills in a recognized occupation. Any student enrolled as of October 15 of the current school year is considered enrolled for the year.

Enter enrollment data using the following student characteristic determinants:

Minority - Is the student from an ethnic or racial minority group such as American Indian (Native American), Black, Oriental (Asian American), Spanish Surname (White), Spanish Surname (Non-white), or from any other group where English is a second language?

Majority - All those not considered minority.

A. Regular Students - Students representing the general population.

B. Disadvantaged Students - Persons who have academic socio-economic, or cultural handicaps that prevent them from succeeding in occupational education programs for persons without such handicaps.

Table 1.1 Cont'd

The term includes persons whose needs for such programs or services result from poverty, neglect, delinquency or cultural or linguistic isolation from the community at large. Physically or mentally handicapped persons are not included in this category. As a guide when identifying the disadvantaged students in your program, you should be able to answer "Yes" to at least two of these questions:

(1) Is the student from an ethnic or racial minority group such as American Indian (Native American), Black, Oriental (Asian American), Spanish Surname (White), Spanish Surname (Non-white), or from any other group where English is a second language?

(2) Does the student speak and/or write English inadequately because English is his second language?

(3) Does the student live in government-subsidized low-income housing?

(4) Are the student and his family recipients of public assistance?

(5) Does the student live in substandard housing which is scheduled to be demolished or converted according to a plan such as urban renewal?

(6) Are the student's parent(s) chronically unemployed and/or disabled?

Table 1.1 Cont'd

(7) Is the student eligible for a free hot lunch and/or milk program in school?

(8) Is the student's educational background in mathematics or his achievement in other academic areas inadequate to perform at the level required in regular occupational programs?

C. Handicapped Students - Students who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled or who have other health impairments.

D. Disadvantaged and Handicapped - Students who qualify under descriptions B and C defined above.

E. Additional Students - Students who are enrolled in the program as "auditors," or those who are not taking programs for credit, or those who are not enrolled in this program as a career goal but who may be acquiring entry-level skills. For example, a college or academic program student who is taking a course in automotive mechanics tune-up as an elective to learn to tune an automobile would be entered in line 10E. Also, students taking personal typing courses would be included in line 10E. Should there be any doubt as to how a given student is to be classified, consult the guidance officer.

Table 1.1 Cont'd

Step 9 - Refer to line 11, "Program Totals," and enter the totals of line 10 (A + B + C + D) (Do not include line 10E.)

Step 10 - Refer to line 12, "Department Totals," and enter the totals of line 10 (A + B + C + D + E.)

Step 11 - Refer to line 13, "Approved Reimbursement," and indicate whether this program is funded under Chapter 74 or 70 of the General Laws.

Table 1.11 Total School Enrollment and Occupational Enrollment by Grade

Table 1.12 Total Community College/Junior College Enrollment and Occupational Enrollment

Tables 1.11 and 1.12 simply collect aggregate enrollment for the entire school by grade and level for all sessions, regular day, evening and summer for all programs. The summer session students attending during this fiscal year are to be reported in these tables. The primary purpose of these forms is for computer verification of the accuracy of that data reported in Table 1.1

Secondary level schools are requested to complete Table 1.11 only.

Community or Junior Colleges are requested to complete Table 1.12 only.

Instructions for Table 1.11

Step 1 - Refer to lines 1 through 4 in column 1, grades 9 through 12, and in columns 2, 3, and 4, "School Enrollment," report total aggregate occupational and non-occupational enrollment in these grades by sex (columns 2 and 3) and the grade totals in column 4.

Step 2 - Refer again to lines 1 through 4 in column 1, grades 9 through 12, and in columns 5, 6, and 7, "Occupational Enrollment," report occupational enrollment only in these grades by sex (columns 5 and 6) and the grade totals in column 7.

Table 1.11 Cont'd

NOTE: This enrollment data is to include all students who have an occupational objective as a matter of record and who are enrolled in a program (or a sequence of courses) that is specifically designed to prepare them for employment through the acquisition of entry-level skills in a recognized occupation. This would include students in regular high schools enrolled in Business Distribution, Consumer and Homemaker, industrial arts programs and the like.

Step 3 - Refer to line 5, column 1, "Secondary Totals," and enter the totals for lines 1 through 4 in columns 2 through 7.

Step 4 - Refer to lines 6 and 7 in column 1, grades 13 and 14, and report the school enrollment, occupational and non-occupational, in columns 2, 3 and 4 and the occupational enrollment in columns 5, 6, and 7 in the same manner as grades 9 through 12 were reported in Steps 1 and 2.

NOTE: Do not report two-year Community or Junior College enrollments here. They are to be reported in Table 1.12.

Step 5 - Refer to line 8, column 1, "Post-Secondary Total," and enter the totals for lines 6 and 7 in columns 2 through 7.

Step 6 - Refer to line 9, column 1, "Adult Totals," and report the school enrollment (occupational and non-occupational) in columns 2, 3, and 4, and the total occupational enrollment only in columns 5, 6, and 7 in the same manner as grades 9 through 12 were reported in Steps 1 and 2.

Instructions for Table 1.12

Step 1 - Refer to lines 1 and 2, in column 1, grades 13 and 14, and in columns 2, 3, and 4, "School Enrollment," report the total aggregate occupational and non-occupational enrollment in these grades by sex (columns 2 and 3) and the grade totals in column 4.

Step 2 - Refer again to lines 1 and 2, in column 1, grades 13 and 14, and in columns 5, 6, and 7, "Occupational Enrollment," report the occupational enrollment only in these grades by sex (columns 2 and 3) and the grade totals in column 4.

NOTE: This enrollment data is to include all students who have an occupational objective as a matter of record and who are enrolled in a program (or a sequence of courses) that is specifically designed to prepare them for employment through the acquisition of entry-level skills in a recognized occupation.

Step 3 - Refer to line 3, column 1, "Post-Secondary Total," and enter the totals for lines 1 and 2 in columns 2 through 7.

Step 4 - Refer to line 4, column 1, "Adult Totals," and report the school enrollment (occupational and non-occupational) in columns 2, 3, and 4 and the total occupational enrollment in columns 5, 6, and 7 in the same manner as grades 13 and 14 were reported in Steps 1 and 2.

Table 1.2 School Administrative Staff

Table 1.2 requests information concerned with the occupational administrative staff in a school. This data requested does not play a part in the MISOE Census Data System but it is necessary to fulfill the Annual Federal Report requirements. Only staff members directly involved in school administration activities are requested, and the following definitions are offered to ensure that positions are consistently reported.

1. Director - Administrative personnel other than those who have been assigned responsibilities relating to the overall occupational education programs.
2. Supervisor - Administrative personnel other than teachers who have been assigned responsibilities relating to one or more occupational programs.
3. Guidance - Administrative personnel responsible for helping pupils assess and understand their abilities, aptitudes, interests, environmental factors and educational needs.
4. Other Administrative Personnel - In many instances schools have their own designation for certain administrative personnel not included in the above categories. Such personnel should be reported as "other."

Table 1.2 Cont'd

5. Part-time - A position is considered part-time if

(a) the individual is employed in the school part-time.

(b) the position responsibilities are involved with non-occupational as well as occupational programs.

(c) the individual occupying the position has some other position in another school.

(d) the position involves occupational programs at more than one level (secondary, post-secondary and adult.)

Instructions for Table 1.2

Step 1 - Refer to columns 2 through 7, "Secondary, Post-Secondary, Adult" levels and in lines 1 through 4 report the number of individuals employed full- and part-time at each level in the position associated with each line.

Step 2 - Refer to line 5, column 1, "Total (Unduplicated)", and report the total number of individuals occupying full-time and part-time positions in the appropriate columns 2 through 7.

NOTE: The term "unduplicated" means that each staff person should be counted only once when being reported in line 5, the total row. For example, if an individual functions as both a director and a supervisor, this individual should only be counted once in the total.

Step 3 - Refer to column 8, "Total (Unduplicated)" and report the total number of individuals in each position designated in lines 1 through 4. An unduplicated total is

Table 1.2 Cont'd

requested here as in Step 2.

Step 4 - Refer to line 5, column 8, "Total Unduplicated Count at All Levels and Positions," which is identified with a frame, and enter the appropriate unduplicated number. This figure is to reflect the total number of individuals who are involved in the administration of occupational programs in your school.

Table 1.3 Occupational Teacher and Department Head Staff Survey:

Staff Characteristics

The professional characteristics and salaries of the school teaching and department head staff are to be reported in this table. The individual faculty and department head members are keyed to their respective occupational departments and/or programs and to specific groups of students which they are teaching and/or supervising. These student groups are described in the MISOE department head report by their characteristics and by the entry-level skills that they are expected to perform upon graduation. Thus, this data can be enormously useful in the analysis of teacher characteristics as they relate to educational outcomes. In addition, since the salaries are directly connected to programs and, in view that salaries account for the major part of program costs, the data is essential in the determination of the costs of individual programs .

Instructions for Table 1.3

Step 1 - Refer to line 1, "Teacher or Department Head Name" and for a given department offering occupational programs enter the names of all part- and full-time teachers and teacher aides instructing in the department. Also include the name of the department head whether he or she teaches or not. Enter the first two initials and the last name by printing in block letters, e.g. J.J.SMITH.

Table 1.3 Cont'd

Step 2 - Refer to line 2, "Social Security Number" and enter the person's social security number.

Step 3 - Refer to line 3, "Certification Number" and, if certified, enter the person's Department of Education certification number.

Step 4 - Refer to line 4 "Department USOE Code" and enter the same USOE Code number to describe the department in which this staff member is assigned, as was used in Table 1.1, to describe it.

Step 5 - Refer to line 5, "Teacher, Teacher Aide, Department Head" and enter the appropriate digit to indicate the position of the staff member as follows:

1 = teacher

2 = teacher aide

3 = department head

Step 6 - Refer to line 6 "Full-time or Part-Time." If this staff member is a full-time employee of the school system, place a "1" in the appropriate column, whether or not he or she is assigned to this department full-time. Otherwise, enter a "2".

Step 7 - Refer to line 7, "Sex" and enter "1" if staff member is a male and a "2" if a female.

Step 8 - Refer to line 8, "Majority or Minority." If staff member is from an ethnic or racial minority group such as American Indian (Native American), Black, Oriental (Asian American), Spanish Surname (White), Spanish Surname (Non-White), or from any other group where English is a

Table 1.3 Cont'd

second language, enter the number "2" in the appropriate column. Otherwise, enter "1".

Step 9 - Refer to line 9, "Age", and enter staff member's age in large, readable digits.

Step 10- Refer to line 10, "Does This Teacher Teach in More Than One School?". Place "1", indicating "yes", only if staff member teaches in more than one school within one school system. Place a "2" to indicate "no".

Step 11- Refer to line 11, "Highest Level of Educational Attainment". Use the following code to record the 'highest educational attainment' for each staff member.

1 = high school diploma or less
2 = 1-3 years of a 4-year college program
3 = completed with diploma 2 years post-secondary or community or junior college
4 = completed credit requirements for 4-year college, no degree
5 = Bachelor's Degree
6 = 30 credits beyond Bachelor's Degree, no additional degree
7 = Master's or Law Degree
8 = 60 credits beyond Bachelor's
9 = 90 credits beyond Bachelor's but no Ph. D.
10 = Ph. D., Ed. D., M. D.

- - - - - - -

Degree in a Second Field

11 = Associate's
12 = Bachelor's
13 = Master's
14 = Ph. D., Ed. D., M. D.

All staff should have one number from 1 - 10 listed, and a few will have two numbers listed in the event that they have another degree in a different field; for example, a teacher with a Master's Degree in History (7) who also holds a Master's Degree in Economics would be reported as "7/13" in line 11.

Table 1.3 Cont'd

Step 12 - Refer to lines 12 through 14. These items are concerned with years of experience and should include the current school year. (On line 13, "Years Employed in Trade Now Teaching," indicate the number of years this staff member was employed, prior to being employed in this department in an occupation or occupations which is/are the same as that now being taught. Do not include part-time employment while teaching.)

Step 13 - Refer to line 15, "Occupational Teaching Status." Select highest number 1 through 3 that applies to this staff member.

(1) has not attended a course in teacher training.

(2) is currently in a teacher training course

(3) has successfully completed a course in teacher training and has been certified by the Department of Education.

Step 14 -Refer to line 16, "Does This Member Have Tenure?". If yes, indicate by placing "1" in the appropriate column. If no, place a "2".

Step 15 -Refer to line 17, "Annual Contract Salary," and report the staff member's contract salary.

Step 16 -Refer to line 18, "Indicate Sessions in which this member Teaches". Use the following code to indicate the session or sessions to which the staff member is assigned.

Table 1.3 Cont'd

1 = Day

2 = Evening

3 = Summer

If the staff member teaches or supervises in more than one session within the school, all of the applicable codes should be entered, e.g., 1/3 or 1/2.

Step 17 -Refer to line 19, "If a member devotes part of work week to administrative duties, indicate percentage of time in appropriate row," and report the percentages as a function of the total number of hours that the staff member works each week with the school. For example, if a regular day school teacher works a five and one-half (5½) hour day and he, or she, devotes four (4) hours per week of this time to administrative duties, the percentage would be determined and reported as follows:

(1) Determine total hours worked per week:
5½ hours per day X 5 days = 27.5 hours/week

(2) Determine hours per week devoted to administrative duties, 4 hours in this case.

(3) Determine percentage of time devoted to administrative duties as a function of the total hours worked per week:

$$\frac{4}{27.5} \times 100 = 14.9\ \%$$

Thus, 14.9 % would be reported as the percentage of time this staff member devotes to administrative duties during the day session.

As an additional example, if a regular day school teacher is on a five and one-half (5½) day work week during the day and also administers an evening school program for six hours per week, the percentage would be determined and reported as follows:

(1) Determine total hours worked per week:

5½ hours per day X 5 days (day session) = 27.5 hrs/wk

6 hours per week (evening session) = 6.0 hrs/wk

Total hours/week = 33.5 hrs/wk

(2) Determine hours per week devoted to administrative duties, 6 hours in this case.

(3) Determine percentage of time devoted to administrative duties as a function of total hours worked per week: $\frac{6}{32.5} \times 100 = 18.5\%$

Thus, 18.5% would be reported as the percentage of time of the total time worked that this staff member devoted to evening session administrative duties.

Step 18- Refer to line 20, "Enter extra pay received for additional teaching and/or administrative duties." Enter any extra pay received for services performed in day, evening, or summer sessions indicating whether it was for teaching or for administrative duties.

Table 1.4 Capacity of Instructional Area for Occupational Education

- AND -

Table 1.41 Total Capacity of School Instructional Area

Since school buildings and the instructional areas within them represent sizeable public investment, it is important to know how effectively the space is being utilized. Table 1.4 requests capacity data of each room in the school which is assigned for occupational education purposes, while Table 1.41 requests total capacity of school instructional area. These data, when merged with the utilization data obtained from school department heads, will provide the basis for ascertaining the efficiency of utilization of instructional area assigned for occupational programs. In addition, the information may be used to determine whether additional programs can be implemented without having to resort to new construction and can also be used to determine the feasibility of increasing enrollments within existing programs, and will also provide the basis for prorating expenditure information by floorspace.

Instructions for Table 1.4

Step 1 - Refer to column 1, "Room Number or Name", and enter the number or the name (if there is no number) of each room used as an occupational instructional area.

Step 2 - Refer to column 2, "Room Type", and indicate whether each room is used as a laboratory/shop (L/S) or a classroom (C) by placing an "X" in the appropriate column.

Table 1.4 Cont'd

Step 3 - Refer to column 3, "Floorspace", and enter the area of each room in square feet.

Step 4 - Refer to column 4, "Seating Capacity", and enter the number of seats or stations of each room.

Step 5 - Refer to column 5, "Code of Department Assigned to Room", and enter the USOE Code number which was assigned to the department in Table 1.1.

Step 6 - Refer to column 6 , "Used by Other Departments", and indicate if the room is used by other departments by entering an "X" in the appropriate column.

Instructions for Table 1.41

Step 1 - Refer to line 1, "Laboratory/Shop Areas", and enter the total number of rooms used as laboratory or shop areas in column 1 (include both occupational and non-occupational areas in the entire school.)

Step 2 - Refer to line 2, "Classroom Areas", and enter the total number of rooms used as classroom areas in column 1 (include both occupational and non-occupational areas in the entire school.)

Step 3 - Refer to column 3, "Floorspace Area", and enter the total floorspace area for all laboratory/shop areas (line 1) and for all classroom areas (line 2) in square feet.

Step 4 - Refer to line 3, "Totals", and enter totals in columns 2 and 3.

FALL DEPARTMENT HEAD REPORT - REPORTING BOOKLET 2.0

Reporting Booklet 2.0 consists of the forms listed below which were designed to collect information from the heads of departments or from those responsible for supervising specific instructional areas as they are administratively organized by the school. The booklet also includes terminal performance objectives for certain selected programs.

Table 2.1 Enrollment in Final Grade by Student Groups and Terminal Performance Objectives (TERMOBs)

Table 2.11 Enrollment in Lower Grades by Student Group

Table 2.2 Utilization of Student Class Time: Final Grade

Table 2.21 Utilization of Student Class Time: Lower Grades

Table 2.3 Utilization of Departmental Instructional Area by Rooms

Reporting of Terminal Objectives

This report is to be forwarded directly to the Division of Occupational Education, 182 Tremont Street, Boston, Massachusetts 02111. The cover page is to be completed in its entirety, referring to pages 23 and 24 of the MISOE Census Data System Guidelines and Instructions for Reporting for an explanation of identification and code numbers. It is important to include the name of the person preparing this report and his telephone number on the cover page so that he may be readily reached in the event it becomes necessary to clarify and of the reported information.

Table 2.1 Enrollment in Final Grade by Student Group and Terminal Objectives (TERMOBs)

Table 2.11 Enrollment in Lower Grades by Student Group

The rationale behind these forms is to determine the structure of programs as they are offered to meet local needs. Table 2.1 has been designed to relate programs described by USOE Codes, with enrollment by grades with job-entry skills. The programs are to be broken down into definitive student groups. These data, when merged with financial information, will allow comparisons to be made between schools and school systems in terms of specific objectives that are being offered. Such data allow the distinguishing between specific student characteristics (disadvantaged, handicapped, etc.) and will allow comparisons between such student groups and the numbers of objectives completed by them. These data are designed to improve the performance of those responsible for formulating policy for occupational education by meaningfully describing the results of a previous policy decision.

Table 2.11 is similar to Table 2.1 and is intended to determine the structure of programs in the lower grades by student group. The programs are described by USOE Codes and are connected to enrollment data. Job-entry skills (TERMOBs) are not applicable to lower grade enrollments because TERMOBs describe only outcomes at the end of a given program. The purpose of this data is to provide a basis for analysis of program structure in the determination of program effectiveness with respect to variables, such as

Tables 2.1 and 2.11 (Cont'd)

program length, cooperative, workstudy, exploratory, etc.

Instructions for Tables 2.1 and 2.11

Step 1 - Tables 2.1 and 2.11 request that the program enrollment be broken down into individual student groups as they were described on pages 7-16. In order to group enrollment in this manner, it is necessary to first determine if a program is structured on a"tracked"or "untracked" basis. Refer to pages 7-16 for the description of each type of program structure. After this determination has been made, it is possible to systematically describe the student groups within the program by USOE Code(s). If the program is "tracked", proceed to Step 2. If your program is "untracked", skip to Step 5.

Step 2 - Refer to line 1, "Grade", and enter the grade level at which student groups have been identified and for which USOE Codes are to be assigned, beginning with the final grade in Table 2.1 and with the lower grades in descending order in Table 2.11.

Step 3 - Refer to line 2, "Student Group Name and Number", and, beginning with the final grade, enter the names of groups of students who have received the same key instruction throughout the program and who can be identified in the final grade as having distinct areas of specialization. For example, in a Quantity Foods Program, students may specialize in their final grade in areas of baking,

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cooking, and/or meat cutting occupations.

NOTE: It is noted that if certain groups of students are involved in cooperative arrangements that lead to the acquisition of additional or different job-entry skills than regular students in the same grade, they should be categorized as a separate student group. Also, certain occupational programs are structured to receive groups of students into the final grades who are transfer students from other schools to fill in attrition vacancies. If these students will have acquired different sets of job-entry skills than the regular students, they should be categorized as a separate student group.

Step 4 - Refer to line 3, USOE Code(s)", and reference Appendix H , to determine what USOE Code(s) best describe the occupational areas of instruction which have been identified as distinct student groups. Enter the applicable USOE Code(s) in line 3 under the appropriate student groups which are to be described by the code(s). Skip to Step 6.

Step 5 - This step is not applicable for "tracked" programs and those reporting on "tracked" programs should proceed directly to Step 6.

Worksheet D-1 , which is located in Appendix D, has been provided to assist in the determination of enrollments by student groups and by USOE Codes for "untracked" programs. Upon having completed this worksheet in accordance with the directions provided with it, transfer the grade and student group name from lines

1 and 2 of Worksheet D-1 to lines 1 and 2 of Table 2.1 or 2.11. Transfer the applicable USOE Code(s) from line 4 of Worksheet D-1 to line 3 in the appropriate student group column in Table 2.1 or 2.11. Transfer the enrollment totals from line 6 of Worksheet D-1 to line 13 of Table 2.1 or 2.11.

NOTE: An example of a completed Worksheet D-1 is presented in Appendix D.

Step 6 - Refer to lines 4, 5, and 6, "Level, Type, and Session Codes", respectively, and enter the appropriate code numbers as defined on pages 24 through 30.

Step 7 - Refer to line 7, "Program Length", and circle the length of time (in calendar years) to indicate the duration of the program as it is structured by your school for this student group.

NOTE: Certain occupational programs are structured to receive groups of students into the final grades who are transfer students from other schools to fill in attrition vacancies. If the period of enrollment is considerably shorter, they should be grouped separately and the program length specified for this particular group.

Step 8 - Refer to lines 8, 9, and 10, "Cooperative, Work/Study, Exploratory", respectively, and indicate by circling "Yes" or "No" if these programs are so structured. Definitions for each are on page 29 of the Guidelines.

Step 9 - Refer to line 11, "Instructors and Teacher Aides", and list the names of the teachers and teacher aides who instruct each student group. Enter the first two initials and the last name by printing in block letters,

e.g., J. J. SMITH.

In line 11A, place an "X" in the appropriate column if the teacher instructs this student group on a full-time basis. If not, indicate the percentage of time in line 11B that the teacher devotes to this student group. Determine the percentage as a function of the total time that the teacher instructs in the school, including all sessions.

Step 10- Refer to line 12, "Enrollment", and enter the number of students by sex that are enrolled in each student group. The enrollment reported should include all students who are receiving the definitive instruction which characterizes the given student group.

Step 11- Refer to Appendix B , "List of Programs for Which TERMOBs Have been Written", and determine whether objectives have been written for your program. If your program appears on the list and if it is offered as a regular day session program in your school, there should be a TERMOB Reporting Section in your Reporting Booklet 2.0, with the name of your program on it, and you will proceed to the next step to complete Table 2.1. If your program does not appear on this list, Table 2.1 has been completed at this point and you will proceed to Step 13 for the completion of Table 2.11.

NOTE: It is emphasized that the reporting of TERMOBs is only required for regular day session programs.

Step 12- Refer to line 13, "TERMOB Numbers", and, using the"Index of TERMOB Performance Statements" at the end of Reporting Booklet 2.0, enter the TERMOB numbers of all the job-entry skills which are offered to each student group and which are expected to be performed by program completors. It is noted that the TERMOBs are intended to describe minimum job-entry trade requirements and any differences between expected student performance of a TERMOB in the school shop and the on-the-job trade requirements can be noted by the school by a procedure specified later in these instructions.

Step 13- Refer to Table 2.11, "Enrollment in Lower Grades by Student Group", and repeat Steps 1 through 11 for the lower grades, if any.

Table 2.2 Utilization of Student Class Time: Final Grade

and

Table 2.21 Utilization of Student Class Time: Below Final Grade

Table 2.2 and 2.21 request data on how a student's time is utilized within the program. The intent in collecting this data is to ascertain how much time stude[illegible]within the same program or different programs across the state a[illegible]shop-related and academic classes. Such data can be utilized to analyze effects of various program structures on educational outcomes. In addition, the data can be used in the proration and analysis of costs of occupational and non-occupational education. Table 2.2 requests the average hours per week which students in a given program (by student group) devote in shops, laboratories, related and academic classes for final grade students. Table 2.21 requests the same information for the students below the final grades.

Instructions for Tables 2.2 and 2.21

Step 1 - Refer to line 1, "Student Group Number", to the column identified as "101" and in this column in lines 2 "Grade" and 3 "USOE Code(s)" transfer the grade and USOE Code information from lines 1 and 3 of Table 2.1 or 2.11 for corresponding student group number.

Step 2 - Refer to line 4, "In Occupational Shop/Lab Areas", line 5, "In Occupational Related Areas", and line 7, "In Non-Occupational Areas", and enter the average hours per week to the nearest quarter hour which a student group

in this program devotes in these respective areas. For example, if a student group devotes 30 hours in a given area in Week A, and 0 hours in the same area in Week B, the average hours per week devoted in this area is 15.

NOTE: If the amount of time a student devotes in a given area is highly variable and difficult to average on a weekly basis for lines 4, 5, and 7, do not report this data but proceed to Step 6.

Step 3 - Refer to line 6, "Total Occupational Time" (lines 4 plus 5), and enter the total time that a student in each group devotes in all occupational areas in average hours per week.

NOTE: If lines 4 and 5 are blank because of schedule variability, provide a best estimate of how much time an "average student" devotes in occupational areas per week. For example, if an "average student" takes 2½ courses, report the hours per week in 2½ courses.
2.5 x 5 hours per week per course=
12.5 hours per week.

Step 4 - Refer to line 8, "Total All Areas", lines 6 plus 7, and enter the total hours per week a student spends in school. This number should equal the sum of line 6 and line 7, i.e., the length of a school week in hours.

Step 5 - Check to be sure that lines 2 through 8 have been completed for each student group present in the program and previously reported in Enrollment Tables 2.1 and 2.11.

Step 6 - Refer to line 9, "Length of Grade Session", and enter the length of a grade session, semester, trimester, or

Tables 2.2 and 2.21 Cont'd

quarter in weeks. Describe any variation in the above in line 11.

Step 7 - Refer to line 10, "Schedule Variation", and enter the following digit codes to describe the scheduling of classes in this program:

'1' = Same schedule every week.

'2' = One week Schedule A, one week Schedule B.

'3' = Two weeks Schedule A, two weeks Schedule B.

'4' = Three weeks Schedule A, three weeks Schedule B.

'5' = Six day schedule

'6' = Six day schedule and 15 minute module.

'7' = New schedule every week.

'8' = Other (none of the above adequately describe the schedule of this program.)

Step 8 - If digit code '8' is entered in line 10, describe the schedule of this program in line 11. Use item 11 to provide information that is necessary to prevent misinterpretation of any of the previous items as well.

Step 9 - Be sure you have completed Steps 1 through 8 for each student group reported in Tables 2.1 and 2.11.

Table 2.3 Utilization of Departmental Instructional Area

Table 2.3 requests information regarding the utilization of rooms assigned to departments or to instructional areas, as the case may be, in the school. It is desirable to determine how well instructional areas are being utilized, whether they are overloaded, or under-utilized. Certain areas may be unoccupied during evening hours or during summer vacations. Since buildings and the instructional areas within them represent a sizeable investment to the taxpayer and since tremendous resources are being allocated to new building construction, it is essential that all available space be efficiently utilized. This data will be used as the basis to make such analyses. Current programs can be evaluated to determine the feasibility of increasing enrollments in a given area or redistributing enrollments within schools, school systems, and within geographical areas. Also, since rooms may be empty during certain hours (e.g., evenings), some programs may be added without construction of new buildings or additions, or current programs may be expanded to fill empty classrooms. In addition, this data can be used in the proration and analysis of the distribution of certain facility-related expenditures in the determination of program costs.

The school administrators (principals and directors) are requested in their report to provide a schedule of rooms and their capacities which are assigned to this department. Given this capacity information and the utilization data provided by this Table 2.3, efficiencies can be easily determined.

Table 2.3 Cont'd

Instructions for Table 2.3

Step 1 - Refer to Table 2.3, "Utilization of Departmental Instructional Area", item 1 at the top of the table, and check the appropriate box to indicate the applicable schedule type utilized by this department.

Check a ( ) Weekly if the program is scheduled the same each week.

Check b ( ) Alternating if your program is scheduled on an alternating shop-class and related class schedule.

Check c ( ) Variable if your program is not the same every week, or if it is not a simple alternating schedule.

Step 2 - Refer to item 2 at the top of the Table 2.3, and check appropriate box to indicate if there is, or if there is not a change in schedule by semester.

Step 3 - Refer to column 1, "Room Number or Name", and enter the room numbers (or name if there is no number) for every room assigned to this department for instructional purposes. If the department is on an alternating schedule (e.g., one week in, one week out), use Schedule A on the left-hand side of Table 2.3 for the first alternation (items 1A through 20A), and use Schedule B on the right-hand side of Table 2.3 for the second alternation (items 1B through 20B). If the room schedule is the same each

Table 2.3 Cont'd

week, report only one schedule for each room using the left-hand side of Table 2.3 only. Also indicate in column 1 if the room is a lab (or a shop) by circling "L/S" or, if it is a classroom, by circling "C".

Step 4-Refer to column 2, "Day of the Week", and for each day enter the number of hours that each room is used in the appropriate columns for morning, afternoon and evening, for all of the lines of day.

Also enter in the appropriate column the number of student hours for each day of the week. For example, if there are 30 tenth grade students in Room 140 on Monday from 8 a.m. to 10 a.m., and 28 eleventh grade students in the same room from 10 a.m. to 12 noon, the room would be in use for 4 hours, and the information should be reported as follows:

Room No. or Name	Day of the Week	Morning 7 a.m. - 12:00 noon	
		Number of Hours	Number of Student-Hours
140	Mon.	4	116

10th grade students -

30 students x 2 hours = 60 student-hours

11th grade students -

28 students x 2 hours = 56 student-hours

TOTAL number of student-hours = 116

Table 2.3 Cont'd

Step 5 - Proceed in the same manner for all of the days in the week for all of the times of day, viz., morning, afternoon and evening.

Step 6 - Calculate and report totals for each room on the appropriate line.

TERMINAL PERFORMANCE OBJECTIVES (TERMOBS) & REPORTING FORMS

This section describes the reporting process by which an Occupational Education program faculty within a school can communicate to the Department of Education the occupational skill capabilities which students are expected to perform upon completion of the program. These job-entry skills, or TERMOBs, (previously discussed on pages
have been defined in terms of specific performances or behaviors and are presented in a prescribed format to facilitate the reporting process. They are called terminal performance objectives (or TERMOBs) and they have been developed for twenty occupational program areas (see Appendix B). They are classified in a manner that conveniently allows each TERMOB to be related to the instructional units of the curriculum.

Since TERMOBS focus on large, complex performances, a relatively small number of TERMOBs is necessary to describe the outcomes of an occupational program. The TERMOB format being open-ended and flexible allows each school to report its unique end-program objectives by adding, modifying or revising the TERMOB as desired. That is to say, that the TERMOB in no way restricts the instructional process by imposing standard outcomes on a program, but it was especially designed to allow each school to communicate its own objectives.

To maximize the effectiveness of TERMOB usage by a school as a management tool, the selection process (or reporting process) should result from meetings and discussions of the faculty of

the department which is reporting them. The administrators of the school (and even the students) might be part of such discussions. Certainly the Advisory Council should be included in these deliberations.

The system for reporting TERMOBS includes the following components:

Table T-1 & T-1A Instructional Division & Unit Outline

Table T-2 & T-2A TERMOB Division & Unit Outline

Terminal Objectives (TERMOBs)

Table T-3 List of Basic Supplies

Table T-4 Reporting Additional TERMOB - General Statements of Performance (2.01 Statements)

Each of these components is discussed below and is followed by a step-by-step instructions for their completion.

Table T-1 Instructional Division and Unit Outline

and

Table T-1A Additional Instruction Division and Unit Outline

The instructional content of an occupational program is usually described by schools by course outlines (sometimes called curriculum outlines) which are broken down into major divisions of instruction and further into sub-divisions. MISOE has developed Instructional Division and Unit Outlines (Table T-1) for the purpose of describing the instructional content of given programs as they may be offered in Massachusetts. These instructional outlines are intended to contain all of the instructional units offered in the state and were developed through a broad-based input by schools throughout the state. The Instructional Division and Unit Outline, therefore, should contain all of the instructional units for a subject program, but it is not expected that a program would necessarily include all of the units offered by this outline, as this would be a function of local needs. Table T-1A has been included to allow a school to report additional instructional units which were not included in Table T-1.

The purpose of these Tables is to provide a basis to relate curriculum content with the TERMOBs.

Instructions for Tables T-1 and T-1A

Step 1 - Examine the Instructional Division and Unit Outline (T-1) and determine whether or not it contains all of the instructional content of your program. If it does, check

the space marked "yes" and circle those units which are taught in your program. If it does not, check the space marked "no", circle those units which are taught in your program, and indicate in Table T-1A the divisions and/or units that must be added to this outline in order for it to include the complete instructional content of your program.

Step 2 - If the Instructional Division and Unit Outline cannot practically represent your curriculum, insert your program outline in its entirety, behind the MISOE instructional Division and Unit Outline, to be returned to the Division of Occupational Education.

Table T-2 TERMOB Division and Unit Outline and Table T-2A Additional TERMOB Divisions and Units

Since TERMOBs are broad-based and include many curriculum areas within a single objective, a scheme was devised by which broad-scoped skill areas could be conveniently classified. This classification scheme is called the TERMOB Division and Unit Outline (Table T-2) and it is included to describe skill areas for which TERMOBs have been written. Table T-2A is provided to allow a school to report additional skill areas taught but which are not included in Table T-2.

Instructions for Tables T-2 and T-2A

Step 1 - Examine the TERMOB Division and Unit Outline (T-2) to acquire a sense of the scope of the job-entry level performances which have been developed to describe the program. All TERMOBs in this manual are classified in accordance with this division and unit outline. Determine whether or not the TERMOB Division and Unit Outline contains all of the topics for which your students acquire job-entry skills and circle those units which apply. Check the appropriate space on the top of Table T-2 to indicate coverage.

Step 2 - If the TERMOB Division and Unit Outline does not adequately represent or does not contain all of the job-entry skills which a program completor is expected to acquire, add in Table T-2A whatever divisions and/or units you feel are necessary in order for your program outcomes to be described.

REPORTING TERMOBS

The TERMOB numbers of the job-entry skills offered by your program and expected to be performed by your graduates were reported by you in Table 2.1 "Enrollment in Final Grade by Student Group and Terminal Performance Objectives." These TERMOB numbers were reported strictly on the basis of the "Index of TERMOB Statements" which appears in the back of the TERMOB File. It is recognized that there is considerable variation in how different schools offer their objectives to students and also that there is considerable variation among the schools in the expected minimum performances of student groups upon program completion. Therefore, this portion of the reporting system provides the means for a school to report the TERMOB exactly as it is offered by your program.

The following process of TERMOB reporting should be done only for those TERMOBS which are being offered by your program (as reported in Table 2.1).

Each TERMOB should be carefully considered, leaving all of the TERMOBs attached in the booklet. A duplicate TERMOB Booklet is being provided to you so that a record of what was reported may be retained in your school files.

Step 1 - Refer to the first TERMOB which was listed in Table 2.1 and note that the left-hand page presents the TERMOBs as a job-entry skill. The right-hand page is provided for you to report any modifications that must be made to the TERMOB in order for it to represent the objective as it is being offered at your school. Examples

of modified TERMOB are given in Appendix D.

First examine the top of the page, listing the program, division and unit descriptors of the TERMOB and determine if these descriptors are appropriate for your department. If not, enter any modification on the right-hand page.

Step 2 - Examine the boxed 2.01 statement. Does this represent a job-entry skill in your program? If it does, place a check in the space provided to the left of the statement number. If it does not, use the appropriate section of the right-hand page to specify the modifications necessary so that it represents the terminal performance ability of your students.

Step 3 - Examine the list of operations in the Performance section, 2.02 up to 3.00. Are all operations necessary to successfully complete the general performance statement (2.01) listed? If not, list any additionally required steps on the right-hand page in the appropriate section. Is there a preferred sequence of completion of these operations? If there is, indicate the sequence by placing numbers in the spaces provided to the left of the statement number. If not, place all "1's" in the spaces. Do not place any mark to the left of procedures not judged necessary for the completion of the performance statement.

Step 4 - Examine Section 1.00, "Condition". Are all tools, supplies, and equipment necessary to complete the performance listed? If so, place a check in the space to the left of each numbered item that applies. Use the appropriate section of the right-hand page to list any additional condition items.

Step 5 - Examine the boxed 3.01 statement. Does this express the overall extent to which the performance should be accomplished? If it does, place a check in the space provided to the left of the statement number. If it does not, use the appropriate section of the right-hand page to specify the necessary modifications.

Step 6 - Examine the list of operational extents in the Extent section, 3.02 up to 4.00. Each statement here corresponds to the similarly numbered statement in the Performance section. Does each statement express the extent to which the corresponding operation should be accomplished? If each does, place a check in the space provided to the left of the statement number. If it does not, use the appropriate section of the right-hand page to specify the necessary modifications. If additional operations were specified in the Performance sections, extents for these operations should also be specified on the right-hand page.

Step 7 - Repeat the previous four steps for each TERMOB which is applicable to your programs.

Table T-3 List of Basic Supplies

The condition specification of each TERMOB is coded from 1.00 up to 2.00 and it is intended to include all tools, supplies, machinery, and equipment that are necessary for the execution of the specified performances. It is noted, however, that the conditions are in a form that individually identify by codes key items that are usually essential to the general performance, while basic tools and supplies are grouped in a single category as an appendix to the TERMOB file and is referred to as the "Basic List of Supplies". This basic list is intended to include all basic items, such as hammers, screwdrivers, pencils, rulers, etc. which would be too numerous to delineate for each objective.

It is recognized, however, that each basic item is an essential part of an occupational program since teachers devote considerable effort in the instruction of students in their proper usage. And since there is variability among schools and programs as to what may constitute a basic list of supplies, Table T-3 is provided to describe such a listing. Each department is requested to critically review the list and indicate additional items as specifically as possible while omitting items considered as being unnecessary.

Instructions for Table T-3

Step 1 - Examine each Table T-3 (if there is one for your program) of this booklet which list supplies, tools or equipment necessary to the program. Place a check next to each item which is used in your department. Indicate any additional items below those listed.

Table T-4 Additional TERMOB Performance Statements

It is recognized that the TERMOB file for your program may include TERMOBs not offered by your school and may, as well, not include TERMOBs that are offered by your school. The purpose of Table T-4 is to identify TERMOBs or skill areas which have not been recognized during the development process.

The TERMOBs for your program were developed through the cooperation of seven laboratory schools which were selected to represent a wide variety of school settings. The participating schools included regional high schools, regular high schools, comprehensive high schools, etc., from both large cities and towns with the idea of obtaining a wide variety of curriculum designs as inputs to each TERMOB program. It was expected that the participating schools selected would yield a broad range of TERMOBs which would be representative of most programs as they are offered across the State. However, a TERMOB file for an individual program is considered to represent an approximation of the skills that may be offered by a particular program.

Table T-4 is provided for the addition of TERMOB performance Statements which you view as being necessary to be included to represent your program and which have been omitted from the MISOE TERMOB file. A complete statement of the TERMOB is not being requested. Only a general performance statement is requested to indicate the deficient area(s).

Table T-4 Cont'd

For example, a segment of Table T-4 is given below to indicate how an electronics department may offer TERMOB Performance Statements.

- - - - - - - - - -

Table T-4 Additional TERMOB Performance Statements

This form is provided for the addition of TERMOB performance statements to ensure more complete coverage of your program. Please provide a comprehensive performance statement (coded 2.01 on each TERMOB) for each area of deficiency that you have identified.

The performance statement need only be listed identified by the division and unit numbers of the deficient areas; the conditions and extents will be incorporated later.

1. Division 01 Performance Statement Construct
   Unit 02 an Inverter

   Division 01 Performance Statement Construct
   Unit 03 a Parallel Adder

Instructions for Table T-4

Step 1 - Examine the TERMOBs collectively and determine if all of the job-entry skills that your students learn are represented in the TERMOB file. If they are, you have completed the Reporting of TERMOBs. If not, proceed to Step 2.

Table T-4 Cont'd

Step 2 - Refer to item 1, "Division_____, Unit_____", and enter the division and unit number from the "TERMOB Division & Unit Outline", (Tables T-2 and T-2A) which you feel is deficient in TERMOBs.

Step 3 - Refer to item 1, "Performance Statement", and write in the skill which your students learn that has not been included in the TERMOB File.

Step 4 - Include as many Performance Statements in the deficient areas as conveniently possible.

NOTE: Remember that TERMOBs are broad statements of job-entry skills which include the minute enabling objectives which are taught during the course of the program. Only the broad job-entry skills which your graduates are expected to perform are to be included in Table T-4 and not the minute learning tasks.

END-OF-YEAR SCHOOL REPORT - REPORTING BOOKLET 3.0

Reporting Booklet 3.0 consists of the following forms, which are designed to collect data at the school level. The data types to be collected are discussed below and are followed by step-by-step instructions for the completion of the forms.

The booklet is divided into two parts as a matter of convenience since it is likely that the data requested can best be supplied by two different persons. Part A, which is concerned with student data, is directed to the school head, i.e., the principal or director as the case may be. Part B, which is concerned with financial data, is directed to the school system business manager or the responsible school financial officer.

Part A - Student Data

Table 3.1 Student Data Completors, Dropouts, Transfers and Repeaters by Department

Table 3.11 Student Enrollment in Programs Beginning After October 1

Part B - School Expenditures for Occupational Education

Table 3.2 Expenditures for Instructional and Supportive Services by School

Table 3.3 Expenditures by City (or Town) for Services Provided to School

Table 3.4 Supplementary School Information

This report is to be forwarded directly to the Division of Occupational Education, 182 Tremont Street, Boston, Massachusetts 02111. The cover page is to be completed in its entirety, referring to pages 23 and 24 of the MISOE Census Data System Guidelines and Instructions for Reporting for an explanation

REPORTING BOOKLET 3.0 (Cont'd)

of identification and code numbers. It is important to include the name of the person preparing this report and his telephone number on the cover page so that he may be readily available in the event if becomes necessary to clarify any of the reported information.

Table 3.1 Student Data: Completors, Dropouts, Transfers and Repeaters, by Department

Table 3.1 requests data on students who have completed, dropped out, transferred, or who are to repeat. These data are requested by department or instructional area, and are keyed to the enrollment data reported in the Fall School Head Report - Booklet 1.0. These data serve many purposes, but they primarily provide information on the numbers of completors being supplied to the labor market by program, by student characteristics and also provide information on the movement of students within the system.

Instructions for Table 3.1

Step 1 - Refer to line 1, "Department Names." List across the line the names of all departments or administrative instructional areas within your school where students are enrolled exclusively in that area. Using a separate column for each, begin by listing program areas (or departments) for the day sesseion for the final grade (i. e. grade 12) followed by the lower grades (i. e. 11, 10, 9). Then for the same departments or instructional areas, and using a separate column for each, list other sessions, program types and levels. When all variations of programs within a given instructional area are reported, begin with another department and report all of the variations. For schools offering on the order of 20 programs, 70 to 80 columns may be needed to report all program variations. Note that the summer session enrollments to be reported here are for those summer programs offered in the summer preceding this October.

Table 3.1 Cont'd

In cases where students are enrolled in more than one department (and learning entry-level skills in each) list the department names together (e. g. Distributive Education and Office Education.) Lastly, where exploratory programs are offered (generally in grades 9 and 10,) list the names together at the top of the column (e. g. Electrical, Woodworking, Plumbing.)

NOTE: An example of a complete Table 3.1 is given in Appendix E.

Step 2 - Refer to line 2, "USOE Codes," and enter the lowest order applicable code which best describes each department, (e.g. 14.0000, Business/Office Education; 04.0800, General Merchandising; 17.0302, Auto Mechanics; 17.0300, Automotive.)

Step 3 - Refer to line 3, "Grade," and enter appropriate grade level. A separate column is to be completed to record the enrollment for each grade within the department. Use letter "A" to designate Adult programs.

Step 4 - Refer to lines 4, 5 and 6, "Level Code, Type Code, and Session Code," and enter the appropriate code to describe the program for the subject department. A separate column is to be completed to record enrollment for each level, type and session variation.

Step 5 - Refer to line 7, "Exploratory," and indicate if the grade is of the exploratory type.

Table 3.1 Cont'd

Step 6 - Refer to line 8, "Cooperative," and indicate the number of students in this grade who are enrolled in a cooperative arrangement.

Step 7 - Refer to line 9, "Workstudy," and indicate the number of students who are enrolled in a work/study arrangement.

Step 8 - Refer to line 10, "Student Data." These data are to include only those students who have an occupational objective as a matter of record and who are (or were) enrolled in the program (or sequence of courses) specifically for the purpose of preparing themselves for employment through the acquisition of entry-level skills.

Enter student data using the following student characteristic determinants:

Minority - Students from an ethnic or racial minority group such as American Indian (Native American), Black, Oriental (Asian American), Spanish Surname (White), Spanish Surname (Non-White), or from any other group where English is a second language.

Majority - All those not considered Minority.

A. Fall Enrollment - Enter the number of students enrolled in this program as of October 15 by referring to Table 1.1 of the Fall School Head Report - Reporting Booklet 1.0.

B. Completors- Enter the number of students who successfully completed the grade. Completors in the final grade are the graduates or program completors, while enrollees in other grades continue to the next grade level in the program.

Table 3.1 Cont'd

C. Dropouts - Enter the number of students who leave the school for any reason except death before graduation or completion of the terminal program and who do not transfer to another school.

D. Transfers In - Enter the number of students who transfer into the program from within the same school or from another school.

E. Transfers Out - Enter the number of students who transfer out of the program to another within the same school or to another school.

F. Repeaters - Enter the number of students who are not promoted and who will repeat the grade because of unsatisfactory performance.

Table 3.11 Student Enrollment in Programs Beginning After October 1

Table 1.1 of the Fall School Head Report - Reporting Booklet 1.0 - collects enrollment by programs for all programs beginning before October 1.

However, it is noted that there are many instances where certain programs begin after October 1. There are programs that begin after October 1 in schools that are scheduled on a two- or three-semester basis, and also there are many instances where Adult programs begin after October 1. Obviously, the enrollment in these programs would not be known by October 15, and Table 3.11 is provided so that enrollments in these programs can be accurately reported at the end of the year.

It is noted that summer programs beginning after the end of this fiscal year are to be reported in the next fiscal year's Fall Reports, and not in Table 3.11.

Instructions for Table 3.11

Steps 1 through 7 are the same as those for Table 3.1.

Step 8 - Refer to line 10, "Enrollment". These enrollment data are to include all students who have an occupational objective as a matter of record and who are enrolled in a program (or sequence of courses) that is specifically designed to prepare them for employment through the acquisition of entry-level skills in a recognized occupation. Enter enrollment data using the following student characteristic determinants:

Minority - Students from an ethnic or racial minority group such as American Indian (Native American), Black, Oriental (Asian American), Spanish Surname (White), Spanish Surname (Non-White), or from any other group where English is a second language.

Majority - All those not considered minority.

A. Regular Students - Students representing general population.

B. Disadvantaged Students - Persons who have academic, socio-economic, or cultural handicaps that prevent them from succeeding in occupational education programs for persons without such handicaps. The term includes persons whose needs for such programs or services result from poverty, neglect, delinquency or cultural or linguistic isolation from the community at large. Physically or mentally handicapped persons are not included in this category. As a guide to

Table 3.11 Cont'd

identifying the disadvantaged students in your program, you should be able to answer "yes" to at least two of these questions:

1. Is the student from an ethnic or racial minority group, as described above?
2. Does the student speak and/or write English inadequately because English is his second language?
3. Does the student live in Government-subsidized low-income housing?
4. Are the student and his family recipients of public assistance?
5. Does the student live in substandard housing which is scheduled to be demolished or converted according to a plan such as urban renewal?
6. Are the student's parents chronically unemployed and/or disabled?
7. Is the student eligible for a free hot lunch and/or milk program in school?
8. Is the student's educational background in mathematics or his achievement in other academic areas inadequate to perform at the level required in regular occupational programs?

C. Handicapped Students - Students who are mentally retarded, hard of hearing, deaf, speech-impaired, visually handicapped, seriously emotionally disturbed, crippled, or who have other health impairments.

Table 3.11 Cont'd

D. Disadvantaged & Handicapped Students - Students who qualify under descriptions B and C, defined above.

E. Additional Students - Students who are enrolled in the program as "auditors," or those who are not taking programs for credit, or those who are not enrolled in this program as a career goal but who may be acquiring entry level skills. For example, a college or academic program student who is taking a course in automotive mechanics tune-up as an elective to learn to tune an automobile would be entered in line 10E. Also, students taking personal typing courses would be included in line 10E. Should there be any doubt as to how a given student is to be classified, consult the guidance officer.

Step 9 - Refer to line 11, "Program Totals," and enter the totals of line 10 (A + B + C + D.) Do not include line 10E.

Step 10 - Refer to line 12, "Department Totals," and enter the totals of line 10 (A + B + C + D + E.)

Step 11 - Refer to line 13, "Approved Reimbursement," and indicate whether this program is funded under Chapters 70 or 74 of the General Laws.

Table 3.2 Expenditures for Instructional and Supportive Services by School

This table requests actual expenditures for instructional and supportive services of individual schools that offer Occupational Education Programs. It is designed to work in conjunction with the Superintendent's End-of-Year Pupil & Financial Report (EOY -PFR) and it collects School totals for both occupational and non-occupational program expenditures. Table 3.2 also collects expenditures for these services broken out by specified program areas, i.e., by schedule (Schedule A, Regular Day; Schedule B, Special Education; Schedule C, Regular Evening; Schedule D, Regular Vacation; Schedule E, Occupational Day; Schedule F, Occupational Evening; and Schedule G, Other). It is noted that Occupational Program expenditures may be reported in any or all schedules (A through G) in Table 3.2 in accordance with the MISOE definition of an Occupational Education Program. An Occupational Education Program is a program which is structured to prepare students for employment through the acquisition of job-entry skills in a recognized occupation. It includes students who have an occupation objective stated as a matter of record. Therefore, programs not funded under Chapter 74 may be classified as occupational programs and may appear in schedules other than E (Occupational Day Programs) and F (Occupational Evening Programs).

Instructions for Table 3.2

Step 1 - Refer to line 1, column (2), "School Total". Report totals for each expenditure code listed in column (1) by cross-adding the amounts contributed by this school to the expenditure totals reported in Table 1, Schedules A through G in the Superintendent's End-of-Year Pupil and Financial Report (EOY-PFR). The amounts contributed by this school in all schedules should be entered in the appropriate line and should include school totals for both occupational and non-occupational program expenditures. These totals may include expenditures reported for the senior high category, i.e., codes (31) through (36) and beyond grade 12 category, codes (41) through (46).

Step 2 - Refer to line 1, columns (3) through (12), Schedules A through G, and break out the school expenditures from each schedule for which the total system expenditures were reported in the EOY-PFR. That is, report in each schedule the expenditures that this school contributed to the total school system expenditures.

Step 3 - Refer to lines 2 and 3, "2100, Total Supervision; 2100-01, Professional Salaries" and enter the amounts contributed by this school in the appropriate schedule columns. These amounts will include expenditures for both occupational and non-occupational programs.

Table 3.2 Cont'd

NOTE: It is noted that the School Total column will equal the sum of the other columns.

These expenditures are to be reported in the same manner as in the EOY-PFR.

Step 4 - Refer to line 4, "2200 Total Principal's Office" and report expenditures contributed by this school in the appropriate schedule column.

This data is to be broken out in the same manner as in Step 3 and reported as in the EOY-PFR.

Step 5 - Refer to lines 5 through 8, "2300 Total Teaching Services; 2300-01, Professional Salaries Total; 2300-01A, Substitute Teachers' Professional Salaries; 2300-05, Total Supplies."

A. 2300, Total Teaching Services - Report expenditures contributed by this school in the appropriate schedule, using same procedure as in steps 3 and 4.

B. 2300-01, Professional Salaries Total - A breakout of professional teaching salaries is requested to be reported in the appropriate schedules.

C. 2300-01A, Professional Substitute Teachers Salaries - An estimate of substitute teachers salaries is to be reported in the appropriate schedule. It is noted that although this expendi-

ture code is not requested in the EOY-PFR, the amount may be of sufficient magnitude to warrant its application to occupational programs through proration.

D. 2300-05, Total Supplies - An estimate of the cost of supplies is to be reported in the appropriate schedules. Although this expenditure code is also not requested in the EOY-PFR, the amount is believed to be of sufficient magnitude to warrant its application to occupational programs through proration.

Step 6 - Refer to lines 9 through 18,

(a) 2400, Total Textbooks (line 9)

(b) 2500, Total Library Services (line 10)

(c) 2600 Total Audio-Visual Services (line 11)

(d) 2600-01, Professional Salaries (Audio-Visual Services) (Line 12)

(e) 2700, Total Guidance Services, (line 13)

(f) 2700-01, Professional Salaries (Guidance Services) (line 14)

(g) 2800, Total Psychological Services (line 15)

(h) 2900, Total Educational TV Services (line 16)

(i) 2900-01, Professional Salaries (Educational TV Services) (line 17)

(j) 2000, Total Instructional Services (line 18)

For each expenditure code, report amounts contributed by this school in the appropriate schedule column. These figures

Table 3.2 Cont'd

are to be reported in the same manner as they were in the EOY-PFR and as in step 3.

Step 7 - Refer to lines 19 through 39,

(a) Supportive Services (line 19)

(b) 1000, Total Administrative Services (line 20)

(c) 3000, Total Other School Services (line 21)

(d) 4000, Total Operation & Maintenance of Plant Services (line 22)

(e) 4110, Custodial Services (line 23)

(f) 4120, Heating of Building (line 24)

(g) 4130, Utility Services (line 25)

(h) 4210, Maintenance of Grounds (line 26)

(i) 4220, Maintenance of Buildings (line 27)

(j) 4230, Maintenance of Equipment (line 28)

(k) 5000, Total Fixed Charges (line 29)

(l) 6000, Total Community Services (line 30)

(m) 7000, Total Acquisition, Improvement, and Replacement of Fixed Assets (line 31)

(n) 7100, Acquisition and Improvement of Sites (line 32)

(o) 7200, Acquisition & Improvement of Buildings (line 33)

(p) 7300, Acquisition & Improvement of Equipment (line 34)

(q) 7400, Replacement of Equipment (line 35)

(r) 7500, Acquisition of Motor Vehicles (line 36)

(s) 7600, Replacement of Motor Vehicles (line 37)

(t) 8000, Total Debt Service (line 38)

(u) 9000, Total Other School Programs (line 39)

Table 3.2 Cont'd

The basic format for reporting these supportive services is similar to that for the EOY-PFR for all of the expenditure codes. For each code, report amounts contributed by this school in the appropriate schedule column in the same manner as was done for the instructional service expenditures (steps 3 through 6.)

Table 3.3 Expenditures by City (or Town) for Services Provided to Schools Offering Occupational Education Programs

This table requests a breakout of Table 2, "Expenditures by City or Town for Services Provided to Public Schools" of the EOY-PFR into expenditures made for this school (which offers occupational education in accordance with the MISOE definition of Occupational Education Programs at the secondary and post secondary levels) by the City or Town.

Schools which are their own Local Educational Agency such as regional schools will not report data in this Table 3.3, because they provide their own services.

Instructions for Table 3.3

Step 1 - Refer to line 1, column 2, "School Total"and report totals in this column 2 for each expenditure code listed in column 1. These totals are determined by breaking out from the amounts reported in Table 2 of the EOY-PFR the amounts of the services received by this school from the City or Town for each code. Report totals in column 2 for each of the following codes that are applicable:

1000 Administration ..... (line 2)
2500 Library Services ..... (line 3)
3200 Health Services ..... (line 4)
4110 Custodial Services.... (line 5)
4120 Heating Buildings..... (line 6)

Table 3.3 Cont'd

4130	Utility Services	(lire 7)
4200	Maintenance of Grounds	(line 8)
4220	Maintenance of Buildings	(line 9)
4230	Maintenance of Equipment	(line 10)
5100	Employee Retirement	(line 11)
5200	Insurance Services	(line 12)
5400	Debt Service - Current Loans (Interest)	(line 13)
6000	Community Services	(line 14)
7100	Acquisition & Improvement of Sites....	(line 15)
7200	Acquisition & Improvement of Bldgs.....	(line 16)
7300	Acquisition & Improvement of Equip't..	(line 17)
7400	Replacement of Equipment.....	(line 18)
8100	Debt Retirement (Principal).....	(line 19)
8200	Debt Service (Interest)	(line 20)
9100	Programs-Other Districts in Mass.....	(line 21)
9200	Programs-Other Districts Outside Mass.	(line 22)
9300	Payments to Non-Public Schools	(line 23)
9500	Payments to Regional Schools	(line 24)

Table 3.4 Supplementary School Information

This table requests supplementary school information which is necessary for the determination of capital costs for occupational education. The table consists of three parts, namely,

Table 3.41 Original Cost of School and Year of Construction

Table 3.42 Cost of Addition and Years of Construction

Table 3.43 Current Value of Buildings, Land and Equipment

Data is to be reported in this table for all schools that offer Occupational Education Programs.

Instructions for Table 3.4

Step 1 - Refer to Table 3.41, "Original Cost of School & Year of Construction, and report in lines 1 through 4, column 2, the years in which the original school building(s) was constructed, the original (historical) cost of the land, building and equipment at the time the school was built.

Step 2 - Refer to Table 3.42, "Cost of Additions and Years of Construction." Report in lines 2 through 5, in the respective columns for each addition(or remodeling) to the school described in Table 3.41, the year of the addition and the cost of the land & also the cost of the buildings, and equipment installed in those additions or remodeled buildings.

Step 3 - Refer to Table 3.43, "Current Value of Buildings, Land, and Equipment." In line 1, column 2, report the insured value of the building if it is insured.

Table 3.4 Cont'd

Step 4 - Refer to line 3, column 2, of Table 3.43 and report the insured value of the equipment if it is insured.

Step 5 - Refer to lines 1 and 2, column 3, in Table 3.43 and report the assessed valuation of the school buildings and land, using the Board of Assessors of the City or Town as the data source.

END-OF-YEAR DEPARTMENT REPORT - REPORTING BOOKLET 4.0

Reporting Booklet 4.0 consists of the following forms, which are designed to collect data on a department level:

PART A - Student Data

Table 4.1 Program Completors by Student Group

Table 4.11 Enrollment by Student Group for Programs Beginning After October 1

PART B - Occupational Education Department Expenditures

Table 4.2 Superintendents' End-of-Year Pupil and Financial Report Schedule References

Table 4.21 Federal Funds and Department Expenditures

Table 4.22 Current Occupational Education Department Expenditures

Table 4.23 Capital Expenditures for Department Equipment Purchases

TABLE 4.1 PROGRAM COMPLETORS BY STUDENT GROUP

The purpose of this form is to determine the number of students that complete the program by student groups. These student groups are tied to the student groups reported in the Fall Department Head Report - Reporting Booklet 2.0, by means of the student group numbers, e. g. 101, 102, etc. These data then provide the numbers of completors by job-entry skills (TERMOBs) that are being delivered into the labor market.

Instructions for Table 4.1

Step 1 - Refer to Table 2.1 of the Fall Department Head Report - Reporting Booklet 2.0, which was submitted to the Division of Occupational Education in the Fall of this fiscal year, and use the identical descriptors to specify each student group in lines 1 through 9 for final grades only.

Step 2 - Refer to line 10, "Student Data," and in line 10A, "Fall Enrollment," enter the number of students that were enrolled in this student group in the Fall.

Step 3 - Refer to line 10B, "Completors," and enter the number of students who completed the program of study (students who successfully completed and were graduated.)

Table 4.11 Enrollment by Student Group for Programs Beginning After October 1

Table 2.1 of the Fall Department Head Report - Reporting Booklet 2.0 - collects student enrollment in the final grade by student group (and terminal objectives) for regular day session programs beginning before October 1. However, it is noted that there are many instances where certain programs begin after October 1. This occurs most frequently in schools that are scheduled on a two- or three-semester basis. If your school operates so that there are programs beginning after October 1, enrollments in these programs are to be reported in Table 4.11.

The purpose of this form is to determine the structure of occupation programs as they are offered to meet real needs. Table 4.11 has been designed to relate programs described by USOE Codes with enrollment by grades. These enrollments are to be broken down into definitive student groups in a way that provides a more specific description of the occupational areas in which the students are enrolled. These data are useful in providing a basis for analysis of program structure in the determination of program effectiveness with respect to such variables as program length, cooperative, work-study, exploratory arrangements, etc.

Instructions for Table 4.11

Step 1 - Table 4.11 requests that the program enrollment be broken down into individual student groups as they were described on pages 3-11. In order to group enrollment in this manner, it

is necessary first to determine if a program is structured on a "tracked" or an "untracked" basis. Refer to pages 3-11 for the description of each type of program structure. After this determination has been made, it is possible to describe systematically the student groups within the program by USOE Code(s). If the program is "tracked," proceed to Step 2. If your program is "untracked," skip to Step 6.

Step 2 - Refer to line 1, "Grade," and enter the grade level at which student groups have been identified and for which USOE Codes are to be assigned, beginning with the final grade.

Step 3 - Refer to line 2, "Student Group Name," and beginning with the final grade, enter the names of groups of students who have received the same key instruction throughout the program and who can be identified in the final grade as having distinct areas of specialization. For example, in a Quantity Foods Program, students may specialize by their final grade in areas of baking, cooking, and/or meat-cutting occupation.

NOTE: If certain groups of students are involved in cooperative arrangements that lead to the acquisition of additional or different job-entry skills than regular students in the same grade, they should be categorized as a separate student group. Also, certain occupational programs are structured to receive groups of students into the final grades who are transfer students from other schools to fill in attrition vacancies. If these students will

have acquired different sets of job-entry skills than the regular students, they should be categorized as a separate student group.

Step 4 - This step is not applicable for "tracked" programs and those reporting on "tracked" programs should proceed directly to Step 7.

Worksheet D-1 , which is located in Appendix F, has been provided to assist in the determination of enrollments by student groups and by USOE Codes for "untracked" programs. Upon having completed this worksheet in accordance with the directions provided with it, transfer the grade and student group name from lines 1 and 2 of Worksheet D-1 to lines 1 and 2 of Table 4.11. Transfer the applicable USOE Code(s) from line 4 of Worksheet D-1 to line 3 in the appropriate student group column in Table 4.11. Transfer the enrollment totals from line 6 of Worksheet D-1 to line 13 of Table 4.11.

NOTE: An example of a completed Worksheet D-1 is presented in Appendix D.

Step 5 - Refer to lines 4, 5 and 6, "Level, Type and Session Codes", respectively, and enter the appropriate code numbers as defined on page 24 through 30.

Step 6 - Refer to line 7, "Program Length", and circle the length of time (in calendar years) to indicate the duration of the program as it is structured by your school in which this student group is enrolled.

Instructions for Table 4.11 Cont'd

NOTE: Certain occupational programs are structured to receive groups of students into the final grades who are transfer students from other schools to fill in their attrition vacancies. If the period of enrollment is considerably shorter, they should be grouped separately and the program length specified for this particular group.

Step 7 - Refer to lines 8, 9 and 10, "Cooperative, Work/Study, Exploratory", respectively, and indicate by circling "yes" or "no" if these programs are so structured. Definitions for each are on page 29.

Step 8 - Refer to line 11, "Instructors and Teacher Aides", and list the names of the teachers and teacher aides who instruct each student group. Enter the first two initials and the last name by printing in block letters, e.g., J.J.SMITH. Indicate the approximate portion of their time employed in the instruction of this student group.

Step 9 - Refer to line 12, "Enrollment", and enter the number of students enrolled in each student group.

PART B - OCCUPATIONAL EDUCATION DEPARTMENT EXPENDITURES

Table 4.2 Superintendents' End-of-Year Pupil and Financial Report Schedule Reference

The purpose of this table is to determine in which schedule of the EPY-PFR that expenditures for this department or instructional area have been reported.

This information is necessary in order to calculate program costs by a school from the End-of-Year School Report - Reporting Booklet 3.0.

Instructions for Table 4.2

Reporting in Table 4.2 is simply to indicate by means of a check mark (✓) in the appropriate box which schedule of the EOY-PFR that expenditures for this department have been reported.

Table 4.21 Federal Funds and Department Expenditures

The information collected by this table is primarily for use in State reporting to the U. S. Office of Education. This table is to be completed if the Department is funded in whole or in part by Federal funds.

Instructions for Table 4.21

Step 1 - Refer to line 1, "Public Law(s) under which Federal funds were obtained," and specify the Public Law(s) under which Federal funds were obtained.

Step 2 - Refer to line 2, "Project Numbers of Research Grants or Exemplary Programs," and specify the project numbers of research grants or exemplary programs as they are identified with the Division of Occupational Education.

Step 3 - Refer to line 3, "Cooperative Workstudy Programs," and enter the amounts of monies received by this department for Part G Cooperative Programs from Employer Reimbursement, in (a).
In (b), enter the amount of monies received for student compensation in Part H Workstudy Programs.

Table 4.22 Current Occupational Education Department Expenditures

This table collects current expenditures that can be directly associated with this department for the purpose of determining costs on a department or program basis. Teaching supplies, textbooks, equipment maintenance, are examples of expenditures that may be directly associated with a particular program. It is also possible that the program may make considerable use of audio-visual and/or educational TV in the training process. If this is the case, part of the school's 2600 and 2900 expenditures should be allocated to this department. A good basis for proration is the use (number of hours) made of these facilities. It may also be the case that the guidance counselor spends a substantial amount of time in handling students in this program. If this is true, part (or all, if he is exclusively assigned to a program) of his salary should be similarly allocated to the program on the basis of per cent of time spent in the program. Allocations are not to be made indirectly on the basis of enrollment. Blank lines have been left in this table in the expenditure report to handle current expenditures (1000-5000) that are not listed above, which can be directly associated with this program. An example of this is computer rental. The computer might be used in keeping records (2200 - Principal's Office) and in teaching a data processing course in the business education department. You

Table 4.22 Cont'd

would allocate part of the annual rent for the equipment to that department as "2300-4 Teaching Contracted Services".

Instructions for Table 4.22

Step 1 - Refer to line 2, column 1, "2100-01 Teaching Salaries," and if this prcgram is Federally funded, report the amount granted for teaching salaries in column 4.

Step 2 - Refer to line 3, column 1, "2300-05, Teaching Supplies," and report the expenditures for teaching supplies that can be directly associated with this department in columns (3) and/or (4). This includes only those supplies which were specifically purchased for this department or which can be shown to have been transferred to this program, e. g. by vouchers.

Step 3 - Refer to line 4, column 1, "2400, Textbooks," and report amount expended on textbooks for this department in columns (3) and/or (4). Only those expenditures incurred during the current fiscal year are to be reported.

Step 4 - Refer to line 5, column 1, "2600, Audio-Visual," and report expenditures in columns (3) and/or (4) for audio-visual services and equipment that can be directly associated with this department or allocated on the basis of time used by the department.

Step 5 - Refer to line 6, column 1, "2700, Guidance," and report in columns (3)and/or (4), the expenditures for guidance services that can be directly associated with this department.

Instructions for Table 4.22 Cont'd

Step 6 - Refer to line 7, column 1, "2900, Educational TV" and report expenditures in columns (3) and/or (4) those items that can be directly associated with this department or allocated on the basis of time used by the department.

Step 7 - Refer to line 8, column 1, "4230, Maintenance of Equipment," and report expenditures in columns (3) and/or (4) that can be directly associated with the maintenance of equipment for this department.

Step 8 - Refer to line 9, column 2, "Other Current Expenditures (1000-5000) Not Included Above," and report any other current expenditures in lines 10 through 12, columns (3) and/or (4), which can be directly associated with this department. Include all expenditures not previously reported.

Table 4.23 Capital Expenditures for Department Equipment Purchases

The purpose of this table is to collect equipment expenditures for equipment purchased solely for use by this department.

Instructions for Table 4.23

Step 1 - Refer to line 2, "7300, Acquisition of Equipment," and in columns (3) and/or (4), report expenditures for equipment that is of a type not previously owned. For the most part, these purchases would reflect decisions to make changes in skills taught, or in teaching methods, or in a few instances changes in occupations offered.

Step 2 - Refer to line 3, "7400, Replacement of Equipment" and in columns (3) and/or (4), report expenditures on equipment which is followed by the termination (or great reduction) in the use of some other equipment for reasons of disrepair or obsolescence due to changes in industry, and not changes due to teaching methods.

APPENDIX A

Directory of State Department Program Directors,
Regional Office Coordinators and Project MISOE Staff

Programs	Program Directors	Phone No.
Agriculture	Mr. P. Haight	727-5736
Distributive Education	Ms. M. Erickson	727-5735
Health Occupations	Ms. R. Winer	727-5735
Consumer & Homemaking	Ms. M. Duckett	727-8143
Office Occupations (Bus. Ed.)	Mr. P. Carbone Mr. M. Goldman	727-5736
Trades & Industries	Mr. A. Quincy	727-5736
Industrial Arts	Mr. R. Pesce	727-5733
Post-Secondary	Mr. A. Cipriano	727-5738
Adult	Mr. J. Holland	727-5738
Cooperative Education	Mr. R. DiCarlo	727-5736
Financial Officer	Mr. R. Oakes	727-8140
Funding	Mr. T. Janiak	727-8140
Handicapped	Mr. L. Stubbs	727-8143
Disadvantaged	Mr. W. Thomas	727-5738

Regional Offices	Coordinators	Phone No.
Pittsfield	Mr. J. Shiminski	413-499-0745
Springfield	Mr. J. Cangro	413-734-2167
Worcester	Mr. F. Merola	835-6267
North Andover	Mr. J. Purcell	682-5987
Boston	Ms. D. Sever	547-7472
Wareham	Mr. T. Carroll	295-4191

Management Information System for Occupational Education

Project Officer	Mr. W. Kyros	454-0494
DOE Coordinator	Mr. J. Shaffer	454-0494

APPENDIX B

List of Programs for Which Terminal Objectives (TERMOBs) Have Been Written

CDS No.	Name of Program
1	Distributive Education
2	Practical Nursing
3	Occupational Child Care
5	Business Data Processing
8	Automotive Body and Fender
9	Automotive Mechanics
10	Drafting
11	Woodworking
12	Electrical
13	Electronics
14	Plumbing and Pipefitting
15	Graphic Arts, Graphic Design (Commercial Art)
16	Machine Shop
17	Metalworking
18	Cosmetology
19	Quantity Foods
20	Business/Office Education Cluster (Includes Accounting & Computing, Business Data Processing, General Office & Clerical Occupations, and Stenographic, Secretarial & Related Occupations)

APPENDIX C

Example Tables for Reporting Booklet 1.0

Note: Appendices C through F contain all of the tables and forms which appear in the Reporting Booklets. They have been filled in with hypothetical data to exemplify how each form is expected to look after it has been completed.

Version Number

Feb. 26, 1974
Due Date

Northern Berkshire Voc School District 851
Name of School System — System ID No.

Charles H. McCann Technical High School 605
Name of School — School ID No.

John Smith Vice-Principal (413) 663-5383
Name of Preparer of Report — Title — Telephone

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF EDUCATION

FALL SCHOOL HEAD REPORT-REPORTING BOOKLET 1.0
(Principals/Directors)

to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement made under the penalties of perjury.

Feb 20 1974
(Date)

James L. Westall
Superintendent of Schools

Feb 21 1974
(Date)

John Doe
Chairman of School Committee

Table I.1 Student Enrollment by Department (or Instructional Program Area)

1	2	3	4	5	6
1. Department Name(s) (Program Name)	Automotive	Automotive	Automotive	Automotive	Automotive
2. USOE Code(s)	17.0302	17.0302	17.0302	17.0302	17.0302
3. Grade	9	10	11	12	A
4. Level Code	30.0	30.0	30.0	30.0	69.2
5. Type Code	01	01	01	01	01
6. Session Code	1	1	1	1	2
7. Exploratory	Yes ✓ No	Yes No ✓	Yes No ✓	Yes No ✓	Yes No ✓
8. Cooperative	(–)	(–)	(–)	(6)	(–)
9. Workstudy	(–)	(–)	(–)	(–)	(–)
10. Enrollment	Majority / Minority	Majority / Minority	Majority / Minority	Majority / Minority	Majority / Minority
	M F M F	M F M F	M F M F	M F M F	M F M F
A. Regular	13 0				
B. Disadvantaged					
C. Handicapped					
D. Disadv. & Handi.					
E. Additional P.G.					
11. Program Totals	14	15	15	11	110
12. Department Totals	14	15	15	11	110
13. Approved Reimbursement	Chapter 70___ 74 ✓	Chapter 70___ 74 ✓	Chapter 70___ 74 ✓	Chapter 70___ 74 ✓	Chapter 70___ 74 ✓

C-4

Area Number

Table 1.11 Total School Enrollment and Occupational Enrollment by Grade

	1	2	3	4	5	6	7
		School Enrollment			Occupational Enrollment		
	Grade	Male	Female	Grade Total	Male	Female	Grade Total
1	9	152	30	182	152	30	182
2	10	132	31	163	132	31	163
3	11	152	20	172	152	20	172
4	12	114	23	140	114	23	140
5	Secondary Total	550	104	657	550	104	657
6	13	—	—	—	—	—	—
7	14	—	—	—	—	—	—
8	Post-Secondary Total (Non-Community College)	—	—	—	—	—	—
9	Adult Total	1000	255	1255	900	78	978

Table 1.12 Total Community College/Junior College Enrollment & Occupational Enrollment

	1	2	3	4	5	6	7
		School Enrollment			Occupational Enrollment		
	Grade	Male	Female	Grade Total	Male	Female	Grade Total
1	13	1651	1571	3222	1210	1010	2220
2	14	1343	1311	2654	1000	803	1803
3	Post-Secondary Total (Community/Junior College)	2994	2882	5876	2210	1813	4023
4	Adult Total	931	904	1835	468	454	922

Table I.2 School Administrative Staff

1		2	3	4	5	6	7	8
		Secondary		Post Secondary		Adult		Total
Line	Title	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time	(undupl.)
1	Director	1	–	–	–	–	1	1
2	Supervisor	1	–	–	–	1	–	2
3	Guidance	1	–	–	–	–	–	1
4	Other	2	–	–	–	1	–	3
5	Total (Unduplicated)	5	–	–	–	2	1	7

Total Unduplicated Count
At All Levels and Positions

Table 1.3 Occupational Teacher & Department Head Staff Survey: Staff Characteristics

	1	2	3
1	Teacher or Department Head Name	L. Reilly	R. Martin
2	Social Security Number		
3	Certification Number		
4	Department USOE Code	17.0301	17.030
5	Teacher=1; Teacher Aide=2; Dept.Head=3	1	1
6	Full Time=1; Part Time=2	1	1
7	Sex: Male=1; Female=2	1	1
8	Race: Majority=1 Minority=2	1	1
9	Age		
10	Does this teacher teach in more than one school? Yes=1 No=2	2	2
11	Highest level of Educational Attainment	V. cft. T15	V. cft.
12	Years in Present School System	3	4
13	Years Employed in Trade Now Teaching	20	17
14	Years of Teaching Experience	3	4
15	Occupational Teaching Status		
16	Does this member have tenure? Yes=1; 2=No	1	1
17	Annual Contract Salary	13,892	13,136
18	Indicate sessions in which this member teaches. 1=Day 2=Evening 3=Summer	1, 2	1
19	If member devotes part of work week to administrative duties, indicate percentage of time in appropriate row. — Day Session		7%
	Evening Session		
	Summer Session		
20	Enter extra pay received for additional teaching and/or administrative duties — Day Teaching		
	Day Admin.		100
	Evening 17.0301 Teaching	1,045.50	510
	Evening Admin.		
	Summer Teaching		
	Summer Admin.		

Misoe Number

Table 1.4 Capacity of Instructional Area for Occupational Education

1	2		3	4	5	6	
Room Number or Name	Room Type		Floorspace	Seating	Code of Department Assigned to	Used by Other Department	
	I/S	C	(Sq.Ft.)	Capacity	Room	Yes	No
1 157		X	784	24	17.0301	X	
2 158	X		8,028	40	17.1700		X
3 159	X		8,584	40	17.0301		X
4 130	X		3,352	40	17.1007		
5 141	X		4,380	10	17.1400		
6 143	X		800	30	17.1400		
7 145		X	793	24	17.1400	X	
8 161	X		1,750	20	17.1001		
9 163	X		3,340	20	17.1001		
10 164		X	500	24	17.3600		
11 166	X		8,685	60	17.3600		
12 140	X		1,918	24	17.1300		
13 142	X		1,918	24	17.1300		
14 166A			1,200	20	17.1300		
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
Totals			112,892				

Table 1.41 Total Capacity of School Instructional Areas

1	2	3
Instructional Areas	Number of Rooms	Floorspace Area (Sq. Ft.)
1. Laboratory/Shop Areas	28	161,832
2. Classroom Areas	18	8,352
3. Totals	46	170,184

APPENDIX D

Worksheets & Example Tables for Reporting Booklet 2.0

Page D-3 Worksheet for Determination of Enrollment by Student Group and by USOE Code(s) for Untracked Programs

Page D-5 Example Tables

Instructions for Worksheet D-1

Step 1 - Refer to line 1, "Grade", and enter the grade level for which student groups are to be identified beginning with the final grade first.

Step 2 - Refer to line 2, "Student Group Name", and write the names of the groups by which your students are categorized in this grade. A student group is the highest order grouping of students receiving identical key instruction throughout the program. It is noted that if certain groups of students are involved in cooperative arrangements that lead to the acquisition of additional or different job-entry skills than other students in the same grade, they should be categorized as a student group separately.

Step 3 - Refer to line 3, "Course Sequence", and list the key courses that characterize this student group from other groups. Make the course sequence complete enough so that individual students can be readily assigned to it. However, include only those courses that provide "hands on" job-entry skills critical to the student group named. The following criteria can be used for student assignment purposes:

(a) If a student's sequence of courses parallels, or closely parallels, the recommended sequence for a particular occupational area, the student is assigned to the student group of that occupational area.

(b) If no sequence is evident for a particular student, he/she is assigned to the student group area in which he/she has completed the most courses.

(c) If it is impossible to categorize students using the above two criteria, the student's career goal is used as the determining factor. This information can be obtained from the Guidance Department.

Step 4 - Refer to line 5, "Enrollments" and after each student is classified by the criteria defined in the previous step, place a mark for each student in the appropriate student group column also indicating whether the student is a male or female.

Step 5 - Refer to line 6, "Totals, and enter the total count of student enrollment for each group.

Step 6 - Refer to line 4, "USOE Code(s)", and reference Appendix B to determine what USOE Code(s) best describe the occupational areas of instruction which have been identified as distinct student groups. Enter the applicable USOE Code(s) in line 4 under the appropriate student groups which are to be described by the code(s).

Step 7 - After final grade student groups have been identified, coded, and students counted, repeat this process for each of the lower grades, if necessary.

Worksheet D-1 Determination of Enrollment by Student Group
and by USOE Code(s) for Untracked Programs

1. Grade										
2. Student Group Name										
3. Course Sequence										
4. Applicable USOE Code(s)										
5. Enrollment	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
6. Totals										

Visor Number

January 26, 1974
Due Date

Lowell — 160
Name of School System — System ID No.

Lowell Trade High School — 615
Name of School — School ID No.

Peter Smith — Adm. Asst. — (617) 452-5980
Name of Preparer of Report — Title — Telephone No.

Name of Department or Instructional Area

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF EDUCATION

FALL DEPARTMENT HEAD REPORT-REPORTING BOOKLET 2.0

to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all the statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement, made under the penalties of perjury.

Feb 20, 1974
(Date)

Earl Shurfman
Superintendent of Schools

Feb 21, 1974
(Date)

John Jones
Chairman of School Committee

NISOE Number

Table 2.1 Enrollment in Final Grade by Student Group & Terminal Objectives (TERMOB)

		1	2	3
1.	Grade			
2.	Student Group Name and Number		Electronics Technician 101	Communications 102
3.	USOE Code(s)		17.1501 17.1502 (Industrial)	17.1501 (Communications)
4.	Level Code		30.0	30.0
5.	Type Code		01	01
6.	Session Code		1	1
7.	Program Length (Years)		<1 1 2 (3) 4	<1 1 2 (3) 4
8.	Cooperative		(Yes) No	(Yes) No
9.	Workstudy		Yes (No)	Yes (No)
10.	Exploratory		Yes (No)	Yes (No)
11.	Instructors and Teacher's Aides		A. Smyzsky M. Slobodsky L. Langone	A. Smyzsky M. Slobodsky L. Langone
	A. Full Time			
	B. Percentage of Time		1/4 1/4 1/4	1/4 1/4 1/4
12.	Enrollment		Male 14 / Female 1	Male 6 / Female 0

TERMOB Applicability

13. TERMOB Numbers								
	13.001	13.026	13.051		13.024	13.049		
	13.002	13.027	13.052		13.025	13.050		
	13.003	13.028	13.053		13.026	13.051		
	13.004	13.029	13.054		13.027	13.052		
	13.005	13.030	13.055		13.028	13.053		
	13.006	13.031	13.056		13.029	13.054		
	13.007	13.032	13.057		13.030	13.055		
	13.008	13.033	13.058		13.031	13.056		
	13.009	13.034	13.059		13.032	13.057		
	13.010	13.035	13.060		13.033	13.058		
	13.011	13.036	13.061		13.034	13.059		
	13.012	13.037	13.062		13.035	13.060		
	13.013	13.038	13.063		13.036	13.061		
	13.014	13.039			13.037	13.062		
	13.015	13.040			13.038	13.063		
	13.016	13.041			13.039			
	13.017	13.042			13.040			
	13.018	13.043			13.041			
	13.019	13.044			13.042			
	13.020	13.045			13.043			
	13.021	13.046			13.044			
	13.022	13.047			13.045			
	13.023	13.048			13.046			
	13.024	13.049			13.047			
	13.025	13.050			13.048			

Table 2.11 Enrollment in Lower Grades by Student Group

	1	2	3	4	5	6
1.	Grade					
2.	Student Group Name and Number	201	202	203	204	205
3.	USOE Code(s)	17.1501 17.1502	17.1501 17.1502			
4.	LEVEL Code	30.0	30.0			
5.	Type Code	01	01			
6.	Session Code	1	1			
7.	Program Length (Years)	<1 1 2 (3) 4	<1 1 2 (3) 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
8.	Cooperative	Yes (No)	Yes (No)	Yes No	Yes No	Yes No
9.	Workstudy	Yes (No)	Yes (No)	Yes No	Yes No	Yes No
10.	Exploratory	Yes (No)	(Yes) No	Yes No	Yes No	Yes No
11.	Instructors and Teacher's Aides	A. Murphy M. Sanchez	A. Murphy M. Sanchez			
	A. Full Time					
	B. Percentage of Time	1/2 1/2	1/2 1/2			
		Male / Female	Male / Female	Male / Female	Male / Female	Male / Female
12.	Enrollment	30 / 0	40 /	/	/	/

USOE Number

D-7

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Table 2.2 Utilization of Student Class Time: Final Grade

		2	3	4	5	6	7	8	9	10	11
1.	Student Group Number	101	102	103	104	105	106	107	108	109	110
2.	Grade	12	12								
3.	USOE Code(s)	17.0302	17.0302								
4.	In Occupational Shop/Lab Area(s)	11¼	11¼								
5.	In Occupational Related Area(s)	11¼	11¼								
6.	Total Occupational Time (Lines 4 + 5)	22½	22½								
7.	In Nonoccupational Areas	7½	7½								
8.	Total All Areas (Lines 6 + 7)	30	30								
9.	Length of Grade Session (weeks)	40	40								
10.	Schedule Variation	2	2								
11.	Additional Notes Necessary to Explain Lines 4 through 10										

Table 2.21 Utilization of Student Class Time: Lower Grade

	1	2	3	4	5	6	7	8	9	10	11
1.	Student Group Number	201	202	203	204	205	206	207	208	209	210
2.	Grade	11	11	10(E)	10(E)						
3.	USOE Code(s)										
4.	In Occupational Shop/Lab Area(s)	11 1/4	11 1/4	7 1/2	7 1/2						
5.	In Occupational Related Area(s)	11 1/4	11 1/4	7 1/2	7 1/2						
6.	Total Occupational Time (Lines 4 + 5)	22 1/2	22 1/2	15	15						
7.	In Nonoccupational Areas	7 1/2	7 1/2	15	15						
8.	Total All Areas (Lines 6 + 7)	30	30	30	30						
9.	Length of Grade Session (Weeks)	40	40	21	20						
10.	Schedule Variation	2	2	4	4						
11.	Additional Notes Necessary to Explain Lines 4 through 10	Grade 10 Exploratory, alternate after 1st semester (20 weeks)									

Table 2.3 Utilization of Dnpartmental Instructional Area by Rooms

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE A

1	2	3		4		5	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
1A	Mon.	3 1/4	7 1/2				
	Tues.	3 1/4	7 1/2				
110	Wed.	3 1/4	7 1/2				
	Thurs.	3 1/4	7 1/2				
	Fri.	3 1/4	7 1/2				
LS C	Sat.						
TOTALS		16 1/4	357 1/2				
2A	Mon.	3 1/4	65	2 1/2	50	3	24
	Tues.	3 1/4	65	2 1/2	50	3	24
	Wed.	3 1/4	65	2 1/2	50		
	Thurs.	3 1/4	65	2 1/2	50		
	Fri.	3 1/4	65	2 1/2	50		
LS C	Sat.						
TOTALS		16 1/4	325	12 1/2	250	6	48
3A	Mon.	3	66	3	66		
	Tues.	3	66	3	66		
	Wed.	3	66	3	66	3	120
	Thurs.	3	66	3	66	3	120
	Fri.	3	66	3	66		
LS C	Sat.						
TOTALS		15	330	15	330	6	240
4A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
5A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

PROGRAM ELECTRICAL DIVISION 05 INDUSTRIAL & COMMERCIAL WIRING DISTRIBUTION & SPECIAL CIRCUITS

UNIT 01 TRANSFORMERS

TERMOB NO. 12-027

1.00 CONDITION

( ) 1.01 THREE SINGLE PHASE CONSTANT POTENTIAL TRANSFORMERS (AIR-COOLED) 2 WIRE AND 3 WIRE
( ) 1.02 THREE SINGLE PHASE CONSTANT POTENTIAL TRANSFORMERS (OIL FILLED) 2 WIRE AND 3 WIRE
( ) 1.03 THREE SINGLE PHASE CENTER TAPPED CONSTANT POTENTIAL TRANSFORMERS (AIR-COOLED)
( ) 1.04 THREE-PHASE CONSTANT POTENTIAL TRANSFORMERS (OIL FILLED)
( ) 1.05 AUTO TRANSFORMER
( ) 1.06 OVER CURRENT PROTECTIVE DEVICES
(✓) 1.07 SUITABLE WIRE
(✓) 1.08 ASSOCIATED HARDWARE AS NEEDED
(✓) 1.09 ELECTRICIAN'S BASIC TOOL KIT (APPENDIX 1)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

(✓) 2.01 INSTALL A 3 PHASE SCOTT CONNECTED TRANSOFRMER EMPLOYING THE FOLLOWING PROCEDURE:

(✓) 2.02 SKETCH A WIRING DIAGRAM
(✓) 2.03 SELECT PROPER COMPONENTS
( ) 2.04 CHECK ALL COMPONENTS FOR PROPER OPERATION. CHECK OIL LEVEL AND PRESENCE OF MOISTURE (IF APPLICABLE) AND FOR PHASE TO PHASE AND PHASE TO HOUSING SHORTS
(✓) 2.05 MAKE SPLICES AND PROPER CONNECTIONS TO BOXES AND FIXTURES
(✓) 2.06 RUN CIRCUIT INTO SERVICE PANEL
(✓) 2.07 DEMONSTRATE PROPER OPERATION OF THE CIRCUIT

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

(✓) 3.01 CIRCUIT CONFORMS TO N E C AND OPERATES PROPERLY TO THE APPROVAL OF A BOARD OF LICENSED ELECTRICIANS. TO BE COMPLETED WITHIN 4 HOURS, WITH PERFORMANCE OF EACH STEP JUDGED SATISFACTORY OR UNSATISFACTORY

(✓) 3.02 WITH EACH CONDUCTOR SHOWN, COLOR LABELED, WHETHER HOT OR NEUTRAL AND ALL VOLTAGES CLEARLY INDICATED
(✓) 3.03 TO THE EXTENT THAT THE JOB CAN BE DONE PROPERLY IN MOST ECONOMICAL WAY
(✓) 3.04 TO CONFORM WITH MANUFACTURER'S SPECIFICATIONS
(✓) 3.05 TO CONFORM TO N E C STANDARDS AND WIRING DIAGRAM
(✓) 3.06 TO CONFORM TO N E C STANDARDS
(✓) 3.07 CIRCUIT OPERATES PROPERLY

PROGRAM	ELECTRICAL	DIVISION	05	INDUSTRIAL & COMMERCIAL WIRING DISTRIBUTION & SPECIAL CIRCUITS
USOE CODE NO(S)	12.17			
		UNIT	01	TRANSOFRMERS
		TERMOB NO.		12-027

1.00 CONDITION

→ 1.01 Change "air cooled" to "dry type"
→ 1.02 Delete completely
→ 1.03 Change "air cooled" to "Dry Type"
→ 1.04 Delete "oil Filled" Change to "DRy TYPE"
→ 1.05 Change to "Primary overcurrent protective devices"

ALL Below 1.02 Move up one NO.

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

→ 2.04 Delete "check oil level"

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

APPENDIX E

Example Tables for Reporting Booklet 3.0

Feb. 26, 1974
Due Date

Mirror Number

Lowell
Name of School System

160
System ID No.

Lowell Career High School
Name of School

605
School ID No.

Peter Smith Vice Asst. (617) 452-5980
Name of Preparer of Report Title Telephone No.

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF EDUCATION

END OF YEAR SCHOOL REPORT-REPORTING BOOKLET 3.0
to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

Part A - Student Data
(Principals/Directors)

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all the statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement, made under the penalties of perjury.

Feb 20 1974
(Date)

Earl Sharlow
Superintendent of Schools

Feb. 2, 1974
(Date)

James Jones
Chairman of School Committee

Table 3. Student Data: Completors, Drop-Outs, Transfers, and Repeaters by Department

	2				3				4				5				6			
1. Department Name(s) (Program Name)	Automotive				Automotive				Automotive				Automotive				Automotive			
2. USOE Code(s)	17.0302				17.0302				17.0302				17.0302				17.0302			
3. Grade	9				10				11				12				H			
4. Level Code	30.0				30.0				30.0				30.0				692			
5. Type Code	01				01				01				01				01			
6. Session Code	1				1				1				1				2			
7. Exploratory	Yes ✓ No				Yes No ✓				Yes No ✓				Yes No ✓				Yes No ✓			
8. Cooperative	(–)				(–)				(–)				(–)				(–)			
9. Workstudy	(–)				(–)				(–)				(–)				(–)			
10. Student Data	Majority		Minority		Majority		Minority		Majority		Minority		Majority		Minority		Majority			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
A. Fall Enrollment	14	0	–	–	13	2	–	–	15	0	–	–	10	1	–	–	59	51	–	–
B. Completors	13	–			13	2	–	–	15	0	–	–	10	1	–	–	50	40	–	–
C. Drop-outs	1	–			–	–	–	–	–	–			–	–			9	5	–	–
D. Transfer Ins	2	–			–	–	–	–	–	–			–	–			4	–	–	–
E. Transfer Outs	2	–			–	–	–	–	–	–			–	–			4	6	–	–
F. Repeaters	–	–			–	–	–	–	–	–			–	–			–	–	–	–

C-4

Table 3.11 Student Enrollment in Programs Begun After October 1

	1	2	3	4	5	6
Department Name(s) 1. (Program Name)		Auto Body	Auto Body	Auto Body	Auto Body	Auto Body
2. USOE Code(s)		17.0301	17.0301	17.0301	17.0301	17.0301
3. Grade		9	10	11	12	4
4. Level Code		30.0	30.0	30.0	30.0	69.2
5. Type Code		01	01	01	01	01
6. Session Code		1	1	1	1	2
7. Exploratory		Yes ✓ No	Yes No ✓	Yes No ✓	Yes No ✓	Yes No ✓
8. Cooperative		(–)	(–)	(–)	(–)	(–)
9. Workstudy		(–)	(–)	(–)	(–)	(–)
10. Enrollment		Majority M / F; Minority M / F	Majority M / F; Minority M / F	Majority M / F; Minority M / F	Majority M / F; Minority M / F	Majority M / F; Minority M / F
A. Regular		5	7	8	6	20
B. Disadvantaged		2	3	3	2	
C. Handicapped						
D. Disadvtd. & Handicapped						
E. Additional						
11. Program Totals		10	10	11	8	20
12. Department Totals		10	10	11	8	20
13. Approved Reimbursement		Chapter 70 — 74 ✓	Chapter 70 — 74 ✓	Chapter 70 — 74 ✓	Chapter 70 — 74 ✓	Chapter 70 — 74 ✓

Page Number

E-5

Due Date: Feb 26, 1974

Misoe Number

Lowell
Name of School System

160
System ID No.

Lowell Trade High School
Name of School

605
School ID No.

Peter Smith | Adm. Asst | (617) 452-5980
Name of Preparer of Report | Title | Telephone No.

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF EDUCATION

END OF YEAR SCHOOL REPORT - REPORTING BOOKLET 3.0
to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

Part B- School Expenditures for Occupational Education
(Principals/Directors or Business Managers)

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all the statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement, made under the penalties of perjury.

Feb 20 1974
(Date)

Earl Shurlman
Superintendent of Schools

Feb. 21 1974
(Date)

John Jones
Chairman of School Committee

... ... No.

Table 3.2 Expenditures for Instructional & Supportive Services by School

Line		1 Instructional Services	2 School Total	3 A. Regular Day Programs	4 B. Special Education Programs	5 C. Regular Evening Programs
1.						
2.	2100	Total supervision	12,800		6,000	
3.	2100-01	Professional salaries	10,800		6,000	
4.	2200	Total principal's office	73,488		1,178	
5.	2300	Total teaching services	827,164		39,100	
6.	2300-01	Professional teaching salaries	713,392		38,000	
7.	2300-01A	Substitute teachers' salaries	11,000			
8.	2300-05	Total supplies	45,822		1,100	
9.	2400	Total textbooks	8,900		100	
10.	2500	Total library service	15,935		287	
11.	2600	Total audio-visual services	6,400		101	
12.	2600-01	Professional salaries				
13.	2700	Total guidance services	67,453		1,214	
14.	2700-01	Professional salaries				
15.	2800	Total psychological services				
16.	2900	Total educational TV services				
17.	2900-01	Professional salaries				
18.	2000	Total instructional services	1,040,240			
19.		SUPPORTIVE SERVICES	2,000			
20.	1000	Total administrative services	96,906		1,744	
21.	3000	Total other school services	163,426		2,600	
22.	4000	Tot. Operation & Maint. Plant Ser.	43,736		2,100	
23.	4110	Custodial services	27,900			
24.	4120	Heating of building	48,620			
25.	4130	Utility services	11,820			
26.	4210	Maintenance of grounds	10,700			
27.	4220	Maintenance of buildings	20,700			
28.	4330	Maintenance of equipment	75,406		1,206	
29.	5000	Total fixed charges	13,721		220	
30.	6000	Total community services	52,099			
31.	7000	Total acq., Imp. & Repl. Fixed assets				
32.	7100	Acquisition & Improvement of site	12,000			
33.	7200	Acquisition & Improvement of Bldg.				
34.	7310	Acquisition & Improvement of Equip.	40,099			
35.	7400	Replacement of Equipment				
36.	7500	Acquisition of Motor Vehicles				
37.	7600	Replacement of Motor Vehicles				
38.	8000	Total debt services	310,600			
39.	9000	Total other school services				
			1,876,557			

MISOW No.

Table 3.2 (Cont'd) Expenditures for Instructional & Supportive Services by School

Line	6 D. Regular Vacation Programs	7 E. Occup. Day Programs	8 F. Occup. Evening Programs	9 G. Other School Programs	10 G. Other School Programs	11 G. Other School Programs	12 G. Other School Programs	
1								
2		2,800	2,000				1,933	
3		2,800	2,000				1,933	
4		64,957	7,653					
5	1,500	254,574	31,950					
6	1,500	63,642	30,250				6,667.75	
7		11,000						
8		44,472	250					
9		8,800						
10		15,648						
11		5,632	667					
12								
13		66,239					782.50	
14								
15								
16								
17								
18								
19								
20		95,162	2,000				550	
21		85,400					6.50	
22		143,629	12,147					
23								
24								
25								
26								
27							4,220	
28								
29		66,352	7,842					
30		12,074	1,427					
31								
32								
33								
34								
35								
36								
37								
38								
39								

District No.

Table 3.3 Expenditures by City (or Town) for Services Provided to School

Line	1	Function	2 School Total
2	1000	Administration	102,421
3	2500	Library Services	40,200
4	3200	Health Services	3,021
5	4110	Custodial Services	10,004
6	4120	Heating Buildings	46,000
7	4130	Utility Services	104,206
8	4200	Maintenance of Grounds	11,600
9	4220	Maintenance of Buildings	10,900
10	4230	Maintenance of Equipment	24,400
11	5100	Employee Retirement	54,444
12	5200	Insurance Services	—
13	5400	Debt Service-Current Loans (Interest)	1,400
14	6000	Community Services	—
15	7100	Acquisition and Improvement of Sites	—
16	7200	Acquisition and Improvement of Bldgs.	10,422
17	7300	Acquisition and Improvement of Equip.	6,241
18	7400	Replacement of Equipment	28,000
19	8100	Debt Retirement (Principal)	—
20	8200	Debt Service (Interest)	84,222
21	9100	Programs-Other Districts in Mass.	—
22	9200	Programs-Other Districts outside Mass.	—
23	9300	Payments to Non-Public Schools	—
24	9500	Payments to Regional Schools	—
25		TOTAL EXPENDITURES	535,481

Misc. No.

Table 3.4 Supplementary School Information

Table 3.41 Original Cost of School & Year of Construction

1	2
1. Year Constructed	1967-68-69
2. Cost of Land	106,250
3. Cost of Building	3,269,318
4. Cost of Equipment	1,125,537

Table 3.42 Cost of Additions and Years of Construction

1	2	3	4	5
1. Addition Number	First	Second	Third	Fourth
2. Year of Addition	1972			
3. Cost of Land	32,000			
4. Cost of Building	55,622			
5. Cost of Equipment	—			

Table 3.43 Current Value of Buildings, Land & Equipment

1	2	3
	Insured Value	Assessed Valuation
1. Building(s)	3,716,000	2,400,000
2. Land		400,000
3. Equipment	972,000	

APPENDIX F

Example Tables for Reporting Booklet 4.0

Feb. 26, 1974
Mirsoa Number — Due Date

Northern Berkshire Voc. Sch. Dist. — 951
Name of School System — System ID No.

Charles H. McCann Tech. H.S. — 605
Name of School — School ID No.

John Sewall — Vice Prin. — (413) 663-5383
Name of Preparer of Report — Title — Telephone No.

(Name of Department (or Instructional Area)

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF EDUCATION

END OF YEAR DEPARTMENT REPORT-REPORTING BOOKLET 4.0
to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

Part A - Student Data
(Department Head)

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement made under the penalties of perjury.

Feb 20 1974
(Date)

James Westall
Superintendent of Schools

Feb. 21, 1974
(Date)

John Doe
Chairman of School Committee

Table 4.1 Program Completors by Student Group

	1	2	3	4	5	6
1.	Final Grade	11	10			
2.	Student Group Name and Number	101	102	103	104	105
3.	USOE Code(s)	17.1501 17.1502	17.1501 17.1502			
4.	Level Code	30.0	30.0			
5.	Type Code	01	01			
6.	Session Code	1	1			
7.	Program Length (Years)	<1 1 2 (3) 4	<1 1 2 (3) 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
8.	Cooperative	Yes (No)	Yes (No)	Yes No	Yes No	Yes No
9.	Workstudy	Yes (No)	Yes (No)	Yes No	Yes No	Yes No
10.	Student Data	Male / Female	Male / Female	Male / Female	Male / Female	Male / Female
	A. Fall Enrollment	14 / 1	6 / 0	8 / 0	/	/
	B. Completors	13 / 1	6 /	8 /	/	/

F-4

Table 4.11 Enrollment by Student Group for Programs Beginning After October 1

1	2	3	4	5	6
1. Grade	11	10			
2. Student Group Name and Number	301	302	303	304	305
3. CODE Code(s)	17.1501 17.1502	17.1501 17.1502			
4. Level Code	30.0	30.0			
5. Type Code	01	01			
6. Session Code	1	1			
7. Program Length (years)	< 1 1 2 (3) 4	< 1 1 2 (3) 4	< 1 1 2 3 4	< 1 1 2 3 4	< 1 1 2 3 4
8. Cooperative	Yes (No)	Yes (No)	Yes No	Yes No	Yes No
9. Workstudy	Yes (No)	Yes (No)	Yes No	Yes No	Yes No
10. Exploratory	Yes (No)	(Yes) No	Yes No	Yes No	Yes No
11. Instructor's and Teacher's Aides	K. Murphy M. Falkenberg	K. Murphy M. Falkenberg			
Full Time					
Percentage of Time	50 50	50 50			
12. Enrollment	Male 30 / Female 0	Male 40 / Female	Male / Female	Male / Female	Male / Female

F-5

Block Number — Due Date

Northern Berkshire Voc. Schl. Dist. — 851
Name of School System — System ID No.

Chas. H. McCann Tech H.S. — 605
Name of School — School ID No.

John Jones — Principal — (413) 663-5987
Name of Preparer of Report — Title — Telephone No.

Name of Department (or Instructional Area)

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF EDUCATION

END OF YEAR DEPARTMENT REPORT-REPORTING BOOKLET 4.0
to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

Part B-Occupational Education Department Expenditures
(Department Head or Business Manager)

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all statements contained in this report are true to the best of my knowledge and belief, and that this is a true statemend made under the penalties of perjury.

Feb. 17 1974 (Date) — James Fuller, Superintendent of Schools

Feb. 19 1974 (Date) — Charles Brown, Chairman of School Committee

Class No.

Table 4.2 End-of-Year Pupil & Financial Report Schedule Reference

Please check below which schedule of the End-of-Year Pupil and Financial Report You are Reporting to this Department.

[ ] Schedule A - Regular Day
[ ] Schedule B - Special Class
[ ] Schedule C - Regular Evening
[ ] Schedule D - Regular Vacation
[x] Schedule E - Occupational Day
[ ] Schedule F - Occupational Evening
[ ] Schedule G - Others

Table 4.21 Federal Funds and Department Expenditures

Federal Funds - To be completed if the Department is financed in whole or in part by Federal Funds.

1. Public Law(s) under which federal funds were obtained:

a. None b. _____ c. _____

2. Project numbers of Research Grants or Exemplary Programs:

a. _____ b. _____ c. _____

3. Cooperative and Workstudy Programs:

a. Employer Reimbursement Part G Cooperative $ None

b. Student compensation Part H Workstudy $ None

Misoe No. _____

Table 4.22 Current Occupational Education Department Expenditures

1	2	3	4
1. State Expenditure Codes	Description of Current Expenditure	Total Expenditure	Federal Fund Expenditure (if any)
2. 2300-01	Teaching Salaries (Direct Allocation)	37937	
3. 2300-05	Teaching Supplies (Direct Allocation)	1500	
4. 2400	Textbooks (Direct Allocation)		
5. 2600	Audio-Visual (Direct Allocation)		
6. 2700	Guidance (Direct Allocation)		
7. 2900	Educational TV (Direct Allocation)		
8. 4230	Maintenance Equip. (Direct Allocation)		
9. State Expenditure Codes	Other Current Expenditures (1000-5000 Not Included Above)	Total Expenditure	Federal Fund Expenditure (if any)
10. 2100	Salary- Industrial Liaison	300	
11.			
12.			

Table 4.23 Capital Expenditures for Department Equipment Purchases

1	2	3	4
1. State Expenditure Codes	Description of Capital Expenditure	Total Expenditure	Federal Fund Expenditure (if any)
2. 7300	Acquisition of Equipment	600	—
3. 7400	Replacement of Equipment		

APPENDIX G

SCHOOL SYSTEM NUMBERS

and

SECONDARY AND POST-SECONDARY SCHOOL NUMBERS

School System Numbers

and

Secondary and Post-Secondary School Numbers

School System ID No.	School System	School Name	School ID No.
001	Abington	Abington High School	505
005	Agawam	Agawam High School	505
007	Amesbury	Amesbury High School	505
009	Andover	Andover High School	505
010	Arlington	Arlington High School	505
014	Ashland	Ashland High School	505
016	Attleboro	Attleboro High School	505
		Attleboro Voc. Tech High School	605
017	Auburn	Auburn High School	505
018	Avon	Avon High School	505
019	Ayer	Ayer High School	505
020	Barnstable	Barnstable High School	505
		Barnstable Vocational School	605
023	Bedford	Bedford High School	505
024	Belchertown	Belchertown High School	505
025	Bellingham	Bellingham Memorial High School	505
026	Belmont	Belmont High School	505
030	Beverly	Beverly High School	505
		C. H. Patten Voc. High School	605
031	Billerica	Billerica Memorial High School	505
035	Boston	Brighton High School	505
		Charlestown High School	515
		Dorchester High School	520
		Jeremiah E. Burke High School	525
		East Boston High School	530
		English High School	535
		Girls' High School	540
		Girls' Latin High School	545
		Hyde Park High School	550
		Jamaica Plain High School	555
		Boston Latin High School	560
		Roslindale High School	565
		South Boston High School	570
		Boston Technical High School	575
		Boston Business High School	585
		Boston Trade High School	610
		Boston High School	650
		Trade High for Girls	680
		Copley Square High School	690
036	Bourne	Bourne High School	505
040	Braintree	Braintree High School	505
044	Brockton	Brockton High School	505
046	Brookline	Brookline High School	505
048	Burlington	Burlington High School	505
049	Cambridge	Cambridge High and Latin	505
		Rindge Technical High School	510
050	Canton	Canton High School	505
055	Chatham	Chatham High School	505
056	Chelmsford	Chelmsford High School	505
057	Chelsea	Chelsea High School	505
061	Chicopee	Chicopee High School	505
		Chicopee Comprehensive High	510
064	Clinton	Clinton High School	505
065	Cohasset	Cohasset High School	505
071	Danvers	Danvers High School	505
072	Dartmouth	Dartmouth High School	505
073	Dedham	Dedham High School	505
077	Douglas	Douglas Memorial High School	505
079	Dracut	Dracut High School	505
082	Duxbury	Duxbury High School	505
083	East Bridgewater	East Bridgewater High School	505
086	Easthampton	Easthampton High School	505
087	East Longmeadow	East Longmeadow High School	505

and

Secondary and Post-Secondary School Numbers

School System ID No.	School System	School Name	School ID No.
088	Easton	Oliver Ames High School	505
093	Everett	Everett High School	505
		Everett Vocational High School	605
094	Fairhaven	Fairhaven High School	505
095	Fall River	B. M. C. Durfee High School	505
		Fall River Girls Voc. High	605
096	Falmouth	Lawrence High School	505
097	Fitchburg	Fitchburg High School	505
099	Foxborough	Foxborough High School	505
100	Framingham	Framingham North High School	505
		Framingham South High School	510
		Framingham Vocational High	605
101	Franklin	Franklin High School	505
103	Gardner	Gardner High School	505
105	Georgetown	Georgetown High School	505
107	Gloucester	Gloucester High School	505
110	Grafton	Grafton Memorial High School	505
111	Granby	Granby High School	505
114	Greenfield	Greenfield High School	505
115	Groton	Groton High School	505
117	Hadley	Hopkins Academy	505
122	Hanover	Hanover High School	505
125	Harvard	Bromfield School	505
126	Harwich	Harwich High School	505
127	Hatfield	Smith Academy	505
128	Haverhill	Haverhill High School	505
131	Hingham	Hingham High School	505
133	Holbrook	Holbrook High School	505
136	Holliston	Holliston High School	505
137	Holyoke	Holyoke High School	505
		Holyoke Trade High School	605
138	Hopedale	Hopedale High School	505
139	Hopkinton	Hopkinton High School	505
141	Hudson	Hudson High School	505
142	Hull	Hull High School	505
144	Ipswich	Ipswich High School	505
149	Lawrence	Lawrence High School	505
150	Lee	Lee High School	505
151	Leicester	Leicester High School	505
152	Lenox	Lenox Memorial High School	505
153	Leominster	Leominster High School	505
		Leominster Trade High	605
155	Lexington	Lexington High School	505
158	Littleton	Littleton High School	505
159	Longmeadow	Longmeadow High School	505
160	Lowell	Lowell High School	505
		Lowell Trade High School	605
		Lowell Girls' Vocational High	610
161	Ludlow	Ludlow High School	505
162	Lunenburg	Lunenburg High School	505
163	Lynn	Classical High School	505
		Lynn English High School	510
		Vocational Technical Institute	605
		Jr. Vocational Technical	610
164	Lynnfield	Lynnfield High School	505
165	Malden	Malden High School	505
166	Manchester	Manchester High School	505
167	Mansfield	Mansfield High School	505
168	Marblehead	Marblehead High School	505
170	Marlborough	Marlborough High School	505
		Marlborough Vocational High	605
171	Marshfield	Marshfield High School	505

School System Numbers (Cont.)

and

Secondary and Post-Secondary School Numbers

School System ID No.	School System	School Name	School ID No.
174	Maynard	Maynard High School	505
175	Medfield	Medfield High School	505
176	Medford	New Medford High School	505
		Medford Vocational-Technical	605
177	Medway	Medway High School	505
178	Melrose	Melrose High School	505
181	Methuen	Tenney High School	505
182	Middleborough	Middleborough High School	505
185	Milford	Milford High School	505
186	Millbury	Millbury Memorial High School	505
187	Millis	Millis High School	505
189	Milton	Milton High School	505
191	Monson	Monson High School	505
192	Montague	Turners Falls High School	505
197	Nantucket	Nantucket High School	505
198	Natick	Natick High School	505
199	Needham	Needham High School	505
201	New Bedford	New Bedford High School	505
204	Newburyport	Newburyport High School	505
207	Newton	Newton High School	505
		Newton South High	510
209	North Adams	Drury High School	505
210	Northampton	Northampton High School	505
211	North Andover	North Andover High School	505
212	North Attleborough	North Attleborough High School	505
214	Northbridge	Northbridge High School	505
215	North Brookfield	North Brookfield High School	505
217	North Reading	North Reading High School	505
218	Norton	Norton High School	505
219	Norwell	Norwell High School	505
220	Norwood	Norwood High School	505
		Henry O. Peabody High School	610
226	Oxford	Oxford High School	505
227	Palmer	Palmer High School	505
229	Peabody	Veterans Memorial High School	510
		Peabody Vocational School	605
236	Pittsfield	Pittsfield High School	505
		Taconic High School	510
		Pittsfield Vocational School	605
242	Provincetown	Provincetown High School	505
243	Quincy	Quincy High School	505
		North Quincy High School	510
		Quincy Vocational-Technical	605
244	Randolph	Randolph High School	505
246	Reading	Reading Memorial High School	505
248	Revere	Revere High School	505
251	Rockland	Rockland High School	505
252	Rockport	Rockport High School	505
258	Salem	Salem Classical High School	505
		Salem Vocational High School	605
261	Sandwich	Sandwich High School	505
262	Saugus	Saugus High School	505
264	Scituate	Scituate High School	505
265	Seekonk	Seekonk High School	505
266	Sharon	Sharon High School	505
271	Shrewsbury	Shrewsbury High School	505
273	Somerset	Somerset High School	505
274	Somerville	Somerville High School	505
		Somerville Tec Trade High	605
277	Southbridge	Southbridge High School	505
		Pre-Vocational School	605

School System Numbers (Cont.)

and

Secondary and Post-Secondary School Numbers

School System ID No.	School System	School Name	School ID No.
278	South Hadley	South Hadley High School	505
279	Southwick	Southwick High School	505
281	Springfield	Classical High School	505
		High School of Commerce	510
		Technical High School	515
		Springfield Trade High School	620
284	Stoneham	Stoneham High School	505
285	Stoughton	Stoughton High School	505
290	Sutton	Sutton High School	505
291	Swampscott	Swampscott High School	505
292	Swansea	Joseph Case High School	505
293	Taunton	Taunton High School	505
295	Tewksbury	Tewksbury Memorial High School	505
301	Tyngsborough	Tyngsborough High School	505
304	Uxbridge	Uxbridge High School	505
305	Wakefield	Wakefield High School	505
307	Walpole	Walpole High School	505
308	Waltham	Waltham High School	505
		Waltham Vocational High School	605
309	Ware	Ware High School	505
310	Wareham	Wareham High School	505
314	Watertown	Watertown High School	505
		Home Base School	510
315	Wayland	Wayland High School	505
316	Webster	Bartlett High School	505
317	Wellesley	Wellesley High School	505
321	Westborough	Westborough High School	505
322	West Boylston	West Boylston High School	505
323	West Bridgewater	West Bridgewater High School	505
325	Westfield	Westfield High School	505
		Westfield Vocational High	605
326	Westford	Westford Academy	505
330	Weston	Weston High School	505
331	Westport	Westport High School	505
332	West Springfield	West Springfield High School	505
335	Westwood	Westwood High School	505
336	Weymouth	Weymouth North High School	505
		Weymouth South High School	515
		Weymouth Voc Tech High School	605
342	Wilmington	Wilmington High School	505
343	Winchendon	Murdock High School	505
344	Winchester	Winchester High School	505
346	Winthrop	Winthrop High School	505
347	Woburn	Woburn High School	505
348	Worcester	Burncoat Senior High School	503
		Doherty Memorial High School	512
		North High School	515
		South High School	520
390	Community Colleges	Berkshire Community College	C05
		Bristol Community College	010
		Cape Code Community College	015
		Greenfield Community College	020
		Holyoke Community College	025
		Mass Bay Community College	030
		Massasoit Community College	035
		Middlesex Community College	040
		Mt. Wachusett Community College	045
		No. Essex Community College	050
		North Shore Community College	055
		Quinsigamond Community College	060
		Springfield Tech Community Coll	065

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School System Numbers (Cont.)

and

Secondary and Post-Secondary School Numbers

School System ID No.	School System	School Name	School ID No.
392	Junior Colleges	Newton Junior College	005
		Quincy Junior College	010
401	Lawrence Voc. Sch. Dist.	Lawrence Vocational School	605
403	Lynn Ind Shoe	Lynn Ind Shoe	605
405	New Bedford Voc.	New Bedford Vocational High	605
406	Northampton - Smith	Smith Voc.& Agr. High School	705
408	Worcester Trade Complex	Worcester Boys' Trade High	605
		David Hale Fanning Trade	606
		Worcester Industrial Tech.	607
600	Acton-Boxborough	Acton-Boxborough Reg. High	505
603	Adams-Cheshire	Hoosac Valley High School	505
605	Amherst-Pelham	Amherst Regional High	505
610	Ashburnham-Estminster	Oakmont Regional High School	505
615	Athol-Royalston	Athol High School	505
618	Berkshire Hills	Monument Mt. Reg. High	505
620	Berlin-Boylston	Tahanto Reg. High	505
622	Blackstone-Millville	Blackstone-Millville Reg. High	505
625	Bridgewater-Raynham	Bridgewater-Raynham Reg. High	505
635	Central Berkshire	Wahconah Regional High	505
640	Concord-Carlisle	Concord Carlisle High	505
645	Dennis-Yarmouth	Dennis-Yarmouth Reg. High	505
650	Dighton-Rehoboth	Dighton-Rehoboth Reg. High	505
655	Dover-Sherborn	Dover-Sherborn Reg. High	505
658	Dudley-Charlton	Charlton High School	505
660	Nauset	Nauset Regional High	505
665	Freetown-Lakeville	Apponequet Reg. High	505
		Apponequet Reg. Vocational	605
670	Frontier	Frontier Reg. High	505
672	Gateway	Gateway Reg. High	505
675	Hamilton-Wenham	Hamilton-Wenham Reg. High	505
680	Hampden-Wilbraham	Minnechaug Reg. High	505
683	Hampshire	Hampshire Reg. High	505
690	King Philip	King Philip Reg. High	505
		King Philip Reg. Voc. High.	605
695	Lincoln-Sudbury	Lincoln-Sudbury Reg. High	505
700	Marthas Vineyard	Marthas Vineyard Reg. High	505
705	Masconomet	Masconomet Reg. High	505
710	Mendon-Upton	Nipmuc Regional High	505
715	Mount Greylock	Mt. Greylock Reg. High.	505
717	Mohawk Trail	Mohawk Trail Reg. High	505
720	Narragansett	Narragansett Reg. High	505
725	Nashoba	Nashoba Reg. High	505
730	Northboro-Southboro	Algonquin Reg. High	505
735	North Middlesex	North Middlesex Reg. High	505
740	Old Rochester	Old Rochester Reg. High	505
745	Pentucket	Pentucket Reg. High	505
750	Pioneer Valley	Pioneer Valley Reg. High	505
751	Plymouth-Carver	Plymouth-Carver High	505
753	Quabbin	Quabbin Regional High	505
755	Ralph C. Mahar	Ralph C. Maher Reg. High	505
760	Silver Lake	Silver Lake Reg. High	505
765	Southern Berkshire	Mt. Everett Regional High	505
767	Spencer-E. Brookfield	David Prouty High	505
770	Tantasqua	Tantasqua Reg. High	505
		Tantasqua Reg. Voc.	605
773	Triton	Triton Reg. High	505
775	Wachusett	Wachusett Regional High	505
778	Warren-W. Brookfield	Quaboag Regional High	505
780	Whitman-Hanson	Whitman-Hanson Regional High	505

School System Numbers (Cont.)

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Secondary and Post-Secondary School Numbers

School System ID No.	School System	School Name	School ID No.
801	Assabet Valley	Assabet Valley Voc. High	605
805	Blackstone Valley Region	Blackstone Voc-Tech. School	605
806	Blue Hills Voc	Blue Hills Reg. Voc Tech	605
810	Briston Plymouth Voc-Tech	Briston-Plymouth Voc. Tech	605
815	Cape Cod Region	Cape Cod Regional Voc Tech	605
821	Greater Fall River	Diman Reg. Voc Tech High	605
823	Greater Lawrence	Greater Lawrence Reg. Voc Tech	605
828	Greater Lowell	Greater Lowell Voc-Tech	605
829	So. Middlesex Voc Tech	So. Middlesex Voc-Tech	605
830	Minute Man Voc Tech	Minute Man Voc Tech High	605
832	Montachusett Voc-Tech	Montachusett Voc-Tech	605
851	Northern Berkshire Voc	Charles H. McCann Tech	605
852	Nashoba Valley Tech.	Nashoba Valley Tech H. S.	605
853	Northeast Metro Voc	Northeast Metro Reg. Voc Tech	605
860	Pathfinder Voc Tech	Pathfinder Voc Tech	605
871	Shawsheen Valley Voc-Tech	Shawsheen Valley Voc Tech	605
872	Southeastern	Southeastern Reg. Voc Tech	605
873	South Shore Voc Tech	So. Shore Voc Tech	605
876	S. Worcester County	Bay Path Voc Tech	605
879	Upper Cape Cod Voc Tech	Upper Cape Cod Voc-Tech	605
885	Whittier Voc	Whittier Voc	605
910	Bristol County Agr	Bristol County Agri High	705
913	Essex County Agr.	Essex Agr. & Tech Inst	705
915	Norfolk County Agr.	Norfolk County Agri.	705

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